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ABSTRACT

This document is a compilation of 34 English-language abstracts of documents concerning various aspects of education in Argentina, Australia, Bulgaria, Cuba, Denmark, Norway, United Arab Republic, United Kingdom, United States, and West Germany. The abstracts are informative in nature and are each approximately 1,500 words long. They are based on documents submitted by each nation to the International Bureau of Education as representative of their best and most substantial work in the field of education. For documents not written in English, the titles and institutions appear in both translation and transliteration. Series number 4 was initiated in 1971; additions are published quarterly. (For earlier abstracts in this series, see ED 060 227.) (WTB)

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Classification (for the use of receiver)	Country United Kingdom No. 2	CEAS No. 69 Date of issue December 1971

Author	England. Department of Education and Science
Title	*Towards the middle school.*
Bibliographical data	London, Her Majesty's Stationery Office, 1970. xii, 75 p., diagr. (Education pamphlet, No. 57)
Translation	
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The 1944 Education Act defined the age ranges of primary and secondary education so that the normal age of transfer was 11. In the late 1950's doubts were raised about selection for secondary education at the age of 11, and in 1963 a Local Education Authority, West Riding of Yorkshire, published proposals for 9-13 school in some areas. (Education Survey No. 8, "Launching Middle Schools", gives an account of the preparations and early experiences in Division No. 15 of the West Riding of Yorkshire: published by HMSO, London, 1970, 19 pages). Doubts have also been expressed about 11 as the age of transfer.

In 1965 the Government then in office asked LEAs to submit plans for re-organization of secondary education on comprehensive lines and middle schools were suggested as one of six acceptable patterns. The age ranges of middle schools tend to be 9-13 but many are 8-12 and some 10-13.

The child of middle school age is undergoing a period of rapid growth, both mental and physical. There are variations in the stage of development reached between both individuals, and boys and girls as groups, and a time lag between physical maturity and emotional maturity.

Standards and trends among young people at the same age group are of great importance and adult authority is less unquestioningly accepted. The mental age range grows increasingly wide, and problem solving ability seems to develop as a function of personality, temperament and mental ability. At this age, powers of logical thinking are widening in range and some children begin to use abstract logical thoughts. Most, except the very able or mature, learn most easily from practical rather than theoretical approaches. Their behaviour is strongly influenced by the expectations of adults, teachers and parents, as well as peers.

The middle school curriculum should not in any way limit future subject choices, and options should be kept open as long as possible. In fact, teachers have an obligation to open up the options and pass on a diagnosis of childrens' aptitudes to the secondary school

There are substantial differences between primary and secondary school curricula, the primary one being flexible in subject matter and timetabling, with teaching often arising from childrens' activities or special interests, whilst the secondary curriculum is subject-orientated, and syllabuses are structured to gradually build up concepts, knowledge and skills.

Specialist teaching introduced too early detracts from the advantages of a pursuit of interest in the round, and the continuity between different aspects of the curriculum. It is expected that the new developments in methods of primary teaching will be extended up the age range within the middle schools. The framework around which the curriculum is organized can be more elaborate than in the primary school, and older middle-school children will be able to recognize separate elements in the curriculum. There are many ways of grouping areas of teaching. A simple method of organization would be into three main blocks of work, the first emphasizing investigation into science, mathematics and the communication aspects of the arts and language, the second the arts using materials and experience as a stimulus and the third physical education and games. Schemes of work developed by teachers should define objectives, suggest useful starting points, resources and ways of evaluating progress.

School organization is not an end in itself: it is a means of using teaching, space and equipment resources efficiently. The actual number of teachers and their use varies. A local authority survey shows that intended teacher/pupil ratios in middle schools range from 23:1 to 30:1. Some schools will have relatively large classes and a mixture of class teachers and supernumerary teachers; others will use most teachers as class teachers, reducing class sizes and flexibility. Most classes will be grouped by year, but in smaller (two-form entry) middle schools two years may be linked together.

Co-operative teaching patterns will change as children move towards the secondary school. In the first year, when class teachers teach most areas of the curriculum, teachers' co-operation might take the form of joint planning and provision of resources. In the third and fourth years, class teachers taking the traditional core of the curriculum can be reinforced by specialists in French, music etc., or a complementary team of five or six teachers can take the whole age group. The benefits of learning from several teachers have to be balanced with the need for sufficient teacher/pupil contact time to form good relationships.

The way in which children are grouped is dependent on the types of teaching used. Streaming puts many children, particularly those from poor social backgrounds, at a disadvantage, but research has shown that such children in a mixed ability class, whose teacher is unconvinced of the value of mixed ability grouping, can be worse off. Class teaching is unsuitable for unstreamed classes, but tutorials and teaching aids can help solve the problem. Setting, which is the arrangement of children into teaching groups by ability for various subject areas, is probably most suitable for the last year of the middle school.

Slow learners can be helped by withdrawal into small groups with a remedial teacher or by the support of an additional teacher in the class area. Handicraft and home economics are tending to be opened up to boys as well as to girls.

The school programme as a whole is of course influenced by buildings, equipment, staffing and tradition.

The size of a middle school will be related to the youngest age group: 8-12 schools tend to be two-form or three-form entry, in 9-13 schools a four-form entry is appropriate and the same number or at the most a five-form entry for a 10-13 school.

British schools and their headteachers are allowed a great deal of freedom, but major policy changes can only be implemented through an enthusiastic and receptive staff. There are two major co-ordinating roles in the middle school: one of co-ordination of staff concerned with each year group and one of co-ordinating the teaching of a subject or area of the curriculum.

With team teaching, the key consideration is to ensure that each child has enough contact with one or two teachers, whilst keeping within bounds the size of teaching teams. Ancilliary help would enable teachers to be more effective. This could take the form of an 'assistante' giving foreign language help, a technician for audio-visual aids, a teacher-librarian or help with preparation of materials for practical subjects.

Many colleges of education are waiting for the middle schools to take shape before introducing new training for students who will teach in them. The development both of initial and of in-service training for teachers should seek to avoid any stratification of staff which would divide the middle schools into ' primary' and 'secondary' sections.

The suitability of buildings for particular teaching methods shapes the school programme. Purpose-built schools, where architects have designed the school around the proposed activities, can make a positive contribution to the school community. The provision of areas for standing occupations, wet and dirty work, specially surfaced quiet areas, and the use of room dividers and special furniture and storage space are important. Equipment and the facilities for its use must be designed and positioned for safe use by children. Craft, science and cookery areas require power supplies modified by transformers or from dry batteries. Dining provision and assembly areas for large groups of the whole school will be needed and also facilities for tending livestock.

Because the need for facilities in a 9-13 middle school will be greater than in an 8-12 school, and cost limits on building are similar, a 9-13 school will be larger than an 8-12 school housing the same number of children. Old buildings adapted for middle school use can hinder even the most determined teacher, but imaginative re-equipping and re-furnishing can help to overcome these difficulties. Former secondary schools will often have too many specialist facilities and primary buildings may not have the craft and scientific facilities required. The solutions to the problems of existing buildings need architectural answers which must be provided on the basis of information from the educators.

The responsibility for preparation for the middle schools lies with the Department of Education and Science either directly or through HM Inspectors - either directly or indirectly - the Local Education Authorities, the Schools Council and the colleges of education.

Local authority consultation with headteachers, parents and, in some cases, every individual teacher about proposed middle school schemes will allay anxiety about school closures, catchment areas and redeployment of staff. Working parties on school organization and aspects of the curriculum, visits to other schools, courses, and the facilities of a teachers' centre will help prepare the teaching staff.

The lack of continuity between successive stages of education is a serious weakness in the current education system. Teachers who make efforts to know their children intimately, record their progress and aptitudes, and pass the information on to the upper schools can help overcome this problem. Parents can help the two transfers into and out of the middle school by getting to know the teachers of the next school. Schools should seek to involve parents, particularly those who lose interest in their childrens' education, by making visits to the school welcome, and providing open days.

Schools are part of their community and there is much to be learned about the best ways of establishing community-school relationships. Perhaps the greatest advantage to be gained from the new middle schools is the stimulus they provide in looking afresh at old problems.

Abstract received from the Department of Education and Science, London.

Classification (for the use of receiver)	Country United Kingdom	CEAS No. 70
	No. 3	Date of issue December 1971

Author: England. Department of Education and Science

Title: *Probationary Teachers*

Bibliographical data: London, 1971. 4 p. (Reports on education, No. 68)

Translation:

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The first-year experiences of a new teacher are probably more crucial to his future career than first experiences in other professions. Because of the importance of the statutory probationary period the Department of Education and Science sponsored research in England and Wales by the Bristol University School of Education Research Unit between 1966 and 1969 on the policies and practices adopted by agencies responsible for probationary teachers' welfare, working conditions, and on their experiences and their problems. The "Report on Education" No. 68, is a summary of the unpublished report of the survey for 1966/67. Full details of the research should be sought from the Bristol University School of Education, Research Unit, Bristol, England.

Two major factors contributing to probationary teachers' difficulties are the suddenness of the break with the supportive college situation, and the need to master the job immediately in the isolation of the work situation.

In the first stage of the survey, designed to obtain information from local education authorities and headteachers before the 1966/67 intake of probationers, all LEA's and the headteachers of half the maintained schools, both primary and secondary, completed questionnaires on their probationer policies and practices.

The second stage began in the autumn of 1966 with questionnaires to probationers at the start of term and was followed by 'end of year' questionnaires in 1967. In the intervening period, in March 1967, structured interviews were carried out on a sub-sample. Comprehensive data on 3,500 probationers out of a possible 20,000 were collated.

The survey showed that 85% of the sample were under 25 years old, and women made up 70%. Nearly all university graduates taught in secondary schools and almost half in grammar schools. The socio-economic constitution of the sample varied between the sexes and between university graduates and non-graduates. Women and graduates were likely to have come from a middle-class background and men and non-graduates from a working-class background. The majority of the sample was from middle-class backgrounds, and three-quarters of these were teaching in schools where the headteachers estimated that more than half the pupils were children of manual workers.

Most probationers found their training adequate, but a quarter thought it no more than barely adequate. The most common complaint was the insufficient time given to teaching methods in both main and subsidiary subjects.

The main reasons for choosing a particular area or LEA were non-educational, for example family ties, but one in five mentioned 'the attractiveness of the particular post' as an educational reason.

Because of unavoidable LEA placement problems, probationers often received information that was inadequate or too late. One in five learned their pupils' age and ability ranges less than a month before starting and one in ten on the first day at the school, which meant they could not make suitable provision for the term's work. More than a quarter learned of the syllabus or work schemes only within a week of teaching, and two-thirds of these found out on the first day of teaching.

There was no pattern to the preparatory visits to their schools, but only two-fifths met their future pupils; three-fifths their predecessor; and in primary schools one in five did not see their probable classroom.

The LEA in-service course provision varied, but in spite of a small contribution from education institutes and other agencies and the fact that only a minority of LEA's organized induction courses specifically for probationers, by the end of the first year half of the probationers had been invited to, and over a third attended, some form of induction course. The areas induction courses can clarify are self-assessment and the criteria and procedures used for recommending an extension of the probationary period, but two out of three said they did not know how, and by whom, their progress was being assessed.

The LEA inspector or adviser seemed to be the sole source of advice for many probationers even though more than a third had not yet met the inspector or adviser even towards the end of their first year. Less than a fifth kept contact with their training institution and only one in twenty contacted a local college or department. The major teaching problem mentioned by probationers was teaching wide ability groups, when one in ten had no previous knowledge of teaching 'unstreamed' classes. Headteachers most often mentioned the problem of discipline. The majority of probationers felt thair class's ability to be average, but 10% thought their class below the school average ability and 5% thought it above. 5% were teaching in makeshift accommodation. 5% of the probationers felt they could not work at their own pace and with their own emphasis within the syllabus, whilst 73% of headteachers professed a belief in allowing probationers to do so, and 17% said they exercised close control over the probationers' work. Nearly half the probationers thought their school's atmosphere encouraged them to raise teaching standards, but one in twenty were encouraged by the atmosphere to relax their standards. There was some evidence that adverse conditions encouraged the latter. Also, the extent to which probationers can observe other teachers at work may be an important factor in their first-year development, particularly in the suggestion of solutions to such problems as discipline. The supportive role of the headteacher or a colleague in comparison with the inspectorate or college tutor was very important, and only 2% of probationers found their colleagues other than friendly and helpful.

The probationers' questionnaire answers revealed that only 15% felt they needed more advice from the headteachers and their colleagues at the beginning of the year, but that the proportion increased to 23% by the end of the year.

The major problem mentioned by probationers at the beginning and end of the year was their unfamiliarity with the children's social background. (This was also mentioned by 40% of the headteachers). 'Shyness and lack of confidence', and a hesitancy to seek advice, the second and third most frequently mentioned problems at the beginning of the year, became 'conditions of work' and physical tiredness preventing their attending courses, at the end of the year.

Many of the probationers' problems are personal, but the provision of information on local accommodation agencies, a local map showing school location and catchment area or useful addresses would reassure probationers of their employers' concern for their welfare.

Data on the probationers' career expectations showed that two-thirds of the men thought it unlikely that they would leave teaching in the next five years, and 8% thought they would have left within that period; 21% of the women expected to leave within five years, half thought it possible that they would leave within five years, mostly to raise families, and 28% thought it unlikely. The majority of women expected to return to teaching when family commitments permitted. Single women gave their reasons for returning as boredom, and married women as financial considerations. Men probationers were more ambitious than women, mentioning salary conditions and promotion prospects more frequently than women. Half of them were aiming for promotion to posts with higher pay and greater responsibility and over a quarter expected to be heads of departments within five years. 30% of the non-graduate men intended to start work for a degree within that period. By the end of the year 15% of the men and 5% of the women were already undertaking study for further qualifications, and 44% and 19% respectively intended to do so within the next five years. Moreover, recreational courses helpful to teaching had been taken up during the year by 18% of the men and 6% of the women.

The increasing recruitment of mature student teachers and the return of married women to the teaching profession suggest that the needs of the probationers in future will become increasingly diverse. The first-year induction provision may well come to form part of a long-term plan of in-service professional training. *Supplementary information:* the inquiry into teacher training under the chairmanship of Lord James of Rusholme, expected to report in December 1971, will look at the problems and policies involved in the probationary year.

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Author	England. Department of Education and Science.
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Bibliographical data	London, 1971. 4 p. (Reports on education, No. 69)
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special education
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teaching method

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The Education (Handicapped Children) Act, which received the Royal Assent on 23 July 1970 and provides for the education of mentally handicapped children to be the responsibility of local education authorities, took effect on 1 April 1971.

There are some 24,000 mentally handicapped children in 330 training centres, 8,000 in almost 100 hospitals for the mentally handicapped and 750 in special care units for children with serious physical disabilities or behaviour disorders. Other children are in private institutions or at home. Some 400 new special schools will be formed out of training centres and hospital provision. This represents the addition of about two-fifths to the present number of special schools and about one-third to the total number of handicapped children already in special schools (100,000). The children are all severely handicapped by reason of mental retardation and many of them suffer from other disabilities such as epilepsy, cerebral palsy, incontinence, behaviour difficulties or impairments of sight, speech or hearing. They have, however, many basic needs in common with ordinary children.

The earliest arrangements made for mentally handicapped children in Britain tended to concentrate on custodial care rather than on education. By 1870 (when the public education service in England and Wales began) a number of 'asylums' were already in existence. Over the hundred years since then increasing emphasis began to be placed on the educational and social needs of these children, and the Mental Health Act of 1959, embodying the findings of a Royal Commission, recommended that mentally handicapped persons should receive education and training to help them whenever possible to live in the community. 'Training centres' replaced 'occupation centres'; the terms 'feeble minded', 'idiots' and 'imbeciles' gave way to 'subnormal' and 'severely subnormal'. But exclusion from the education system of children ascertained as 'ineducable' or 'unsuitable for education at school' ended only when the Education Act of 1970 became operative. The care of the 'ineducable' was the responsibility of the health authorities.

Interest in mentally handicapped children and in the possibilities of alleviating the effects of their handicaps through education and improved care has grown rapidly over the last decade. Imaginatively designed new training centres have been provided; some have well-equipped nurseries, home-craft units, workshops and swimming pools. Some experimental arrangements show how local health and education departments have already evolved ways of providing a closely co-ordinated service for the whole range of mentally handicapped children.

Training for teachers of mentally handicapped children had been provided by voluntary bodies on a limited scale since the early years of the century. Statutory training for such teachers was not established until 1964, however, when the Training Council for Teachers of the Mentally Handicapped was set up in accordance with the recommendation of the Scott Committee two years earlier. During the last six years, fifteen training courses have been established, eight of them of two years' duration, and seven (for older, experienced teachers) of one year. The academic qualifications of students on these courses have gradually been rising; those who have been successful in gaining the diploma awarded by the Training Council have usually shown a strong sense of vocation and a high level of professional competence.

Some people in the past have thought it was devaluing education to apply it to children previously thought only suitable for 'training', which suggests the idea of getting them to repeat unthinkingly certain patterns of behaviour. Education, however, is much wider than learning to read and write and doing subjects like geography and French: it is learning to live and developing the personality and powers of each indidual. It has social, emotional and physical aspects as well as intellectual. It includes training but (except for the most severely handicapped) goes far beyond it.

Many of the practices typical of normal nursery and infant education have gradually been assimilated in training centres and hospitals. The value of play and exploration is recognized. Many classrooms now offer a variety of learning situations arranged by the teacher to meet the needs of individual children, who learn less readily than normal children do from free activity methods. Emphasis is commonly placed on learning from real life experiences in the outside world. At the junior level, group work leading to the development of interests and habits is commonly found, as well as systematic programmes for individual children designed to help concept formation. Mentally handicapped children do grow up (the idea of mental age is of limited value) and gradually need some of the interests and occupations suitable for older children. The transitional class, a feature of some centres, may offer domestic and manual training, shopping and budgeting, and the acquisition of skills which will later be needed in the workshops. Social training is an important aspect of the children's education and is often systematically promoted with clearly defined goals in view.

There are stages when some of these children will fail to respond to educational stimulus. But such a stage is to be regarded not as a permanent state (though it may conceivably prove to be so) but as a period of latency after which a child may still be capable of considerable development. With most of these children, objectives will be limited, but even modest progress can make an enormous difference to the quality of their lives. A favourable environment (of which education is an important part) can, by helping them to develop whatever ability they have, enable them to take part in a wide range of human activities (including productive employment) and gain a measure of independence. Thus at one and the same time their happiness will be increased and the burden on the community reduced.

The inclusion of mentally handicapped children in the category of 'educationally sub-normal' children gives recognition to the fact that mental handicap is a continuum; it will enable children to be moved from one kind of school to another without formality if their development shows the need for it. It is not meant to suggest that the needs of all mentally handicapped children are alike nor that they should necessarily be educated in the same school. A great deal of experiment is required to find ways of meeting their varying needs.

Despite the training achievements of the last decade, at present only about one-third of the teachers in training centres hold a professional qualification, and even fewer in hospitals; courses of in-service training, local or regional as well as national, are urgently needed. Future training for teachers of mentally handicapped children will become part of the normal teacher training arrangements with a three-year initial teacher training course giving special emphasis to mental handicap.

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Translation	
Keywords	United Kingdom government policy national library bibliographic service information service

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Four institutions in the United Kingdom possess between them unequalled collections and librarians of highest experience: the British Museum Library, the National Central Library, the National Lending Library for Science and Technology and the British National Bibliography. The Government has decided to combine these into a single British Library. Within it the British Museum will retain its name and the National Reference Library of Science and Invention will be renamed the Science Reference Library.

The Trustees of the British Museum and the National Central Library and the Council of the British National Bibliography agree in principle with this decision which accords with the main recommendation of the National Libraries Committee which reported in June 1969.

The objectives of the British Library will be: (a) to make available for reference at least one copy of every book and periodical of domestic origin and of as many overseas publications as possible, to provide a comprehensive reference service of last resort; (b) to provide an efficient central lending and photocopying service in support of the other libraries and information systems; and (c) to provide central cataloguing and bibliographic services related to the needs of libraries and information centres throughout the . . .

country and in co-operation with central libraries overseas.

The British Museum Library and the National Reference Library of Science and Invention will form the core but rehousing of both is a desperate need. The site for their new buildings will be in the seven acres between New Oxford Street and Great Russell Street, and immediately adjacent the British Museum. The operations will therefore be centred on two complexes, one for reference, research and bibliographical services in London, and one for lending services at Boston Spa, Yorkshire, which will have to be expanded.

The British Library will be an independent body corporate with freedom over its internal affairs consistent with the broad objectives of Government policy, employing its own staff, and paying for goods and services obtained from Government departments. Apart from income derived from its own services and from independent sources, it will be financed by an annual grant-in-aid from the Department of Education and Science linked to a three-year "rolling programme" covering both capital and current expenditure.

The Board of the British Library will consist of a Chairman, probably full-time, not more than four other full-time members and not more than seven part-time members. One part-time member will be appointed by the Queen with special responsibility to the Board for the Library of King George III at the British Museum. The other members of the Board will be appointed by the Secretary of State for Education and Science from persons having experience in the management of libraries, in university affairs, and in finance, business and administration. Four of the part-time members will be appointed after consultation with the Secretaries of State for Trade and Industry, for Scotland and for Wales, and the Trustees of the British Museum. The appointments will be made for periods of three to seven years and will be renewable.

While legislation is being prepared, a Committee under Ministerial Chairmanship will plan the new organization, and develop and co-ordinate policy. This Committee will include representatives of the Trustees of the British Museum, the Trustees of the National Central Library, the National Lending Library for Science and Technology and the Council of the British National Bibliography. It will not have executive powers or financial authority but will draw on the component institutions of the future British Library and on the Government departments concerned. It will ensure that the new organization comes into being as a going concern at the earliest practicable date. The interim period is likely to be of at least two years.

The first tasks of the Committee and later of the Board itself will be: planning the structure and staffing of the Board of the British Library; planning the buildings for Bloomsbury and the expansion at Boston Spa; deciding immediate policies. There will be separate directorates for the British Museum Library, the Science Reference Library, Bibliographic Services and Lending Services. The directorate for Lending Services might be divided into two, one for the humanities and social sciences and one for science and technology.

The Organizing Committee will commission studies as a basis for its own planning and background for future policy decisions by the Board. Library and information science research in its wider aspects will remain a responsibility of the Department of Education and Science and will be co-ordinated with research of the Board. For example, the development of the British Library will entail a review of the whole system of inter-library lending, and possibly a joint project.

An Advisory Council will be appointed for each directorate within the British Library to ensure that account is taken of users' needs. A special council will be appointed to give advice on the acquisition of rare books, maps and manuscripts. Members of all these bodies will be appointed by the Board in conjunction with the Department of Education and Science, the Chairman's appointment in each case being subject to the approval of the Secretary of State. The special interest of industry and commerce in the Science Reference Library will be recognized.

Publishers are under a legal obligation to deposit at the British Museum one copy of each item they publish. Arrangements will be made to amend this to an obligation to deposit the material with the British Library.

In the years until new buildings for the library are ready, the Trustees of the British Museum will continue to have responsibility for the buildings. Overall responsibility of the Museum authorities for common services, including security, will be recognized. There will be consultation on appointments of jointly used staff and a standing committee will be established to ensure liasion in all matters of common concern.

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The Library will not have power to borrow and specific authorization will have to be obtained from the Secretary of State for large items of capital expenditure or the undertaking of major new services.

The establishment of the Board will involve additional headquarters costs of £150,000-£200,000 a year, but there should be substantial gains in efficiency. For example, economies should be achieved through the concentration of lending services at Boston Spa. For a given level of services the integrated organization will certainly be more economical than the corresponding development of existing institutions with only loose co-ordination.

User surveys and operational research on an increased scale may be required for a cheap and efficient service. In addition, it may be necessary to invest in automatic data-processing, if benefits justify the cost.

After the consideration of the White Paper by Parliament, the next steps in the development of the British Library are: establishment of the Organizing Committee; legislation to set up the organization and provide for the transfer of staff, property and stock of component institutions; formal establishment of the British Library. Preliminary work on the new buildings in Bloomsbury and development of plans for concentrating lending facilities at Boston Spa will go ahead without delay under the auspices of the Organizing Committee and work on the site might begin even before the British Library comes into being.

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Classification (for the use of receiver)	
Country	Australia
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CEAS No.	73
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Translation	
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The terms of reference for the committee of enquiry appointed by the Victorian State Minister of Health in 1966 were to assess the present and future needs for hospital nurses; to relate the needs to the numbers available and likely to become available; to advise on the effects, financial and otherwise, on hospitals of the curriculum proposed by the Victorian Nursing Council; and to recommend ways in which the training needs of nurses and the service needs of hospitals may be reconciled with least detriment to either. Data relating to the committee's findings are appended to its report.

The committee based its estimates of the number of nurses required for the state's needs to 1975 on the assumption that there would be no radical change in medical science or hospital organization and that the recent trend towards a higher ratio of nursing staff to daily-occupied beds would continue. The committee calculated that, if the pattern of graduations and wastage during training experienced over the 1962-69 period continued, there would be a shortage of 3,146 qualified nurses by 1975. The majority of entrants to training courses - 86% in 1967 - were in the 17-18-year-old age group, and although the number of entrants in this age group has been increasing, the percentage of the female population of this age entering nursing has declined. In order to increase the percentage of entrants it is recommended that recruiting campaigns in schools be intensified, as well as recruiting campaigns directed specifically at non-practising nurses, men, ex-service personnel and women with no previous nursing experience. Wastage rates during training of the 1965/67 intake average 30.03%. Recent studies on wastage during training have suggested that the most important factors contributing to wastage are stress and anxiety in the nursing situation associated with some degree of incompatibility with the work. It is therefore recommended that selection and testing procedures should be improved and that studies be undertaken to define causes of wastage and recommend remedial measures. In order to increase the availability of nurses in hospitals for actual bedside nursing, studies should be made to determine which of their duties could be delegated to non-nursing personnel.

The committee considered nursing education in four main categories: the training of nurses in hospitals, in colleges and in universities, and the training of nursing aides. At present all training of registered nurses is undertaken in 37 country and metropolitan hospitals where the student nurse forms part of the staff for a proportion of each week and is given theoretical training varying from 700 to 1,200 hours during the three years by nurse educators attached to the hospital. Minimum prescribed requirements for theoretical training were laid down in 1940 and there has been constant improvement since that time so that all training now exceeds these requirements.

There are no stated requirements for clinical experiences and the areas in which experience is obtained depend on the resources of the hospital. The committee considered the proposed curriculum for general nurse training adopted by the Victorian Nursing Council in 1965 which called for 1,600 hours of theory and classroom practice over three years, plus 3,296 hours of clinical experience in a wide variety of specified fields, each period of experience being preceded by suitable theoretical training. The committee considered that the time spent on theory and classroom practice should be reduced to 1,200 hours and the student should not be expected to attend classes outside the normal 40-hour working week. With regard to the requirements for clinical experience it considered that in many cases the period specified, for example psychiatry (8 weeks), maternity (3 weeks), was too short to be of any real educational value, and in many cases would require the student to make several moves between hospitals during a short period. With regard to these areas it is suggested that the period of clinical experience be lengthened and treated as an elective, while in other areas such as dietetics and sterilization it is suggested that theoretical training alone is sufficient.

The committee found it impossible to estimate the increase in nursing staff required to compensate for the decreased time students would spend on general ward duties as a result of the proposed curriculum, but quoted a survey conducted in 1968 which showed that the curriculum proposed by the Victorian Nursing Council would require an increase of 30% in nursing staff and double the number of nurse educators. It is therefore recommended that efforts be made to increase the recruitment of trained nurses for nurse educator courses, and that as much use as possible be made of part-time staff and non-nursing teaching staff in suitable areas.

With regard to full-time nurse education, the committee recommended that a college course for nurses, similar to courses conducted in Canada, be set up in a multi-disciplinary college of advanced education. The advantages of such a course lie in the reduction of stress on the student who at present divides her time between ward work and theoretical training, and the facilitation of a correct sequence of theoretical training in a particular field followed by bedside tuition and clinical experience. Many hospitals at present find it difficult to roster students so that the relevant theory is provided before practical work. Private hospitals which at present cannot afford the facilities necessary for a training school could make wards available for college students to receive bedside tuition, thus relieving the strain on major public hospitals. If the course proves successful it should be extended and the existing hospital-based system phased out. Nursing authorities should also give consideration to developing a basic nursing course for a limited number of students in a university. Every encouragement should be given to appropriate registered nurses to undertake post-diploma courses at the College of Nursing.

With regard to the education and role of nursing aides, it is recommended that as there is currently a shortage of nursing aides which is likely to worsen, steps to increase intake and reduce the wastage rate (currently 30%) should be intensified. The present training course of 286 hours over one year should be increased and provision made for post-basic training programmes in specialist fields such as district nursing and infectious diseases nursing. If the training programme is revised in this way, those who complete the course should be entitled 'enrolled nurses' and provision should be made for

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existing nursing aides to qualify in an appropriate course of additional training. Where a nursing aide wishes to become a registered nurse, concessions should be allowed so that the course can be undertaken in some period of less than three years.

The committee found that there was a general lack of statistical and other data concerning nurses in Victoria and recommends that the services of the Computer Study Group of the Hospital and Charities Commission be requested to assist in developing a programme to provide basic and other data relating to nursing services.

Abstract prepared by the Australian Council for Educational Research, Hawthorn, Victoria.

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In 1969 the Commonwealth Government invited a committee of four business management experts from the United States of America to visit Australia to "report on the present availability of post-graduate management education in Australia and to make recommendations in such detail as is considered desirable on the action necessary to meet the future needs of Australia for the highest quality education of this kind". The committee decided to view the needs for post-graduate management education in the light of the nation's overall effort to provide itself with a corps of well-prepared professional managers. Appendices to the report contain detailed notes on the recommended programme of the National School of Management, and a list of persons and institutions visited during the course of the enquiry.

At present management education is carried on in both academic and non-academic institutions. Undergraduate courses are offered in universities in specialized fields of management such as accounting and are almost wholly subject-matter oriented with little attempt to develop the attitudes and concepts necessary for general management. At post-graduate level general management courses are available as follows: two universities offer a two-year part-time course leading to a diploma, four offer part-time course equivalent to two academic years leading to a master's degree, and three of the latter also offer facilities to study for the degree of Doctor of Philosophy. Three universities are planning to introduce master's degree courses in the near future. Non-degree post-experience courses are available at two universities. Five colleges of advanced education offer a range of part-time diploma courses in management varying from two to six years in length. In addition the Australian Institute of Management and the Australian Administrative Staff College provide post-experience courses and seminars of short duration. There are also in-company management development and training programmes and certain special-purpose technical training projects introduced by management consulting and other firms, usually in support of courses of action recommended by a customer firm.

The committee considered that there were elements of strength as well as of weakness in the system of management education. Positive aspects included the way in which educators were responding to the need for management education programmes and their willingness to adapt their programmes in response to local needs and the corresponding growth of interest among business leaders in the potential value of formal education in this field. A weakness of the existing situation was that it did not provide education of the scope and quality that will be required in the coming decade. This is due to the serious underfinancing of post-graduate academic programmes leading to inadequate staffing and insufficiently comprehensive subject-matter coverage, the virtual absence of full-time study in post-graduate management and the consequent high drop-out rate of students. Many faculty members lack the essential combination of academic qualifications, problem-orientated teaching skills and meaningful contact with the business world. Doctoral programmes suffer from the lack of highly-qualified staff and, being modified from previously-existing doctoral programmes in economics, lack the necessary sharp focus on management.

The committee considered various strategies for accelerating the development of management education and concluded that, while local programmes should be encouraged to continue to provide easily-accessible part-time education for management, at least one national school of post-graduate education offering exclusively full-time courses of the highest quality should be established immediately. The school should be situated in a well-developed centre of business activity in order to achieve continual and close interaction with commerce and industry and it should be an integral part of a university in order to economize on administration, computers and library costs and to attract academic staff of high quality. The committee found no university with a clearly outstanding record of research in teaching and management, but recommended that the school should be established within the University of New South Wales in Sydney because of that university's acceptance of the need for the school to remain a semi-autonomous entity within the university, with staff selected under internationally competitive conditions.

With regard to administration, the committee recommended that the school of management education be largely independent of other decision-making bodies, with a board of management - representing the university, the business field, the school and the public sector - which would have responsibility for finance, appointment of staff, the development of academic programmes and the creation of opportunities for the consulting activities of staff. In order to reach the necessary standard of quality and to ensure that the school is essentially self-contained, this board should appoint staff qualified in managerial economics, decision theory and behavioural science, business strategy, business policy, and with special interests in information systems, marketing, production and R & D management.

The primary orientation of the school should be towards the management of business enterprises. The aim of the school, to enhance the effectiveness of Australian professional management, should be carried out through five distinct programmes. Post-experience executive programmes of the highest quality should be conducted for participants of outstanding attainment and promise, and should be integrated as far as possible with the school's other programmes. The degree for the course of study leading to a master's degree should be Master of Business Administration and the course should have the aim of producing flexible practically-oriented general managers. In general a first degree should be required of students entering the course and it is recommended that the majority of students have previous experience in management. The doctoral programme should produce men capable of first-rate teaching and research in the field of management. Candidates should have full exposure to the contents and aims of the M. B. A. programme and should receive training in teaching. The research undertaken should have significant application to Australian enterprises. Specific provision should be made for staff time to develop educational material such as case studies, business games, role playing and simulation techniques suitable for the problems encountered by Australian managers.

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Approximately one third of staff time should be devoted to research. An Institute of Management Research should be established as part of the school with part-time research posts to enable faculty members to divide their time between teaching and research.

In order to provide well-prepared staff for the schools, a programme of scholarships for overseas doctoral study, consisting of 15-20 scholarships per year for five years should be instituted immediately. To allow students to enter the MBA course to study full-time, 25 post-graduate scholarships should be awarded annually, and a long-term low-interest loan scheme should be established for the use of qualified entrants.

With regard to finance it is recommended that the Commonwealth Government should bear the recurrent costs of the teaching programme and the MBA scholarship programme, industry and commerce should bear the recurrent costs of research programmes, overseas doctoral scholarships and the loan fund for MBA students, while the Commonwealth and industry should jointly finance the capital costs associated with establishing the new school. In order to raise the necessary finance, leaders of industry and commerce should establish a Foundation for Australian Management Education, which would support not only the national school but also existing schools. There should be an established procedure through which the schools that need funds should submit detailed descriptions of proposed work as well as budgets to be evaluated by an advisory committee to the Foundation.

Abstract prepared by the Australian Council for Educational Research, Hawthorn, Victoria.

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Author Newman, Frank, et al.

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women's education
drop-outs

This report is the product of an independent Task Force funded by the Ford Foundation. It analyses the problems facing the nation's system of higher education in the 1970s. It concentrates on how well the functioning of that system matches the public interest. Task Force members were chosen on the basis of their ability to think about conventional problems in unconventional ways.

The Task Force decided to concentrate on stating what the problems in higher education are and what general directions should be taken, rather than making specific recommendations addressed solely to the Federal Government. The report is therefore as much addressed to the State capitols, foundations, colleges and universities, and families concerned about higher education as it is to government.

The report asserts that the colleges and universities are not fully serving the educational needs of an expanding population of students and raises the issue as to whether higher education need be academic education. It questions the trend toward the growth of large multicampus public systems of higher education and provides disturbing signs that individual campuses are losing their authority and their sense of mission. It points out how exclusive the colleges are, and demonstrates the value of extending higher education

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off-campus and into homes, community centres, and places of work. All these problems in higher education are identified without making scapegoats of anyone. Citizens, employers, and governments are held as accountable as college presidents, faculties, and students.

In higher education, growth has been used traditionally as a measure of progress. The number of students enrolled, the number of institutions in existence, and the amount of money being spent on higher education all indicate remarkable growth. Total higher education outlays, public and private, have been increasing at two and one-half times the rate of increase in the gross national product— which has itself grown nearly fourfold since 1950. The aim of educators is that every young American should have access to a college education, a goal finally within reach in several states.

These growth statistics mask a major phenomenon: the surprisingly large and growing number of students who voluntarily drop out of college. While many students leave college for personal reasons such as shortage of money or the desire to get a job, the majority of drop-outs cite dissatisfaction with college and the desire to reconsider personal goals and interests as the major reasons for leaving school. College is failing to capture the attention and engage the enthusiasm of many students. For them it is a decidedly negative experience.

While hundreds of thousands leave college because they find it disappointing, hundreds of thousands more enter and stay in when they might better serve their interests and aspirations elsewhere. Strong pressures in the society keep students in an academic lockstep of steadily longer duration. As a result, going to college does not necessarily reflect a conscious decision to pursue a course of study or to prepare for a career. It is simply a socially conditioned reflex. While those particularly disappointed by their college solve the problem by dropping out, large numbers stay in and become, in effect, 'involuntary' students.

American higher education is renowned for its diversity. Yet, in fact, the colleges and universities have become extraordinarily similar. Nearly all the 2,500 institutions have adopted the same mode of teaching and learning. Nearly all strive to perform the same generalized educational mission. The traditional sources of differentiation - between public and private, large and small, secular and sectarian, male and female - are disappearing. Even the differences in character of individual institutions are fading. It is no longer true that most students have real chances among differing institutions in which to seek a higher education.

The faculties which have been educated and then hired by the colleges and universities in the past thirty years have brought extraordinary benefits to the nation. They have produced research of major importance to the growth of the nation and its international position; they have made the graduate schools the envy of the world; they have educated more knowledgeable and sophisticated undergraduates than ever before. Yet, these triumphs have come at the expense of millions of individuals seeking an education. While the population seeking higher education is becoming ever more diverse, the colleges and universities have come to assume that there is only one mode of teaching and learning - the academic mode.

Being a teacher has become part of a broader role centring on one's professional colleagues - attending professional conferences, writing and receiving articles, sponsoring and recruiting apprentices into the discipline. Faculties have come to view themselves as independent professionals responsible to their guilds rather than to the institutions which pay their salaries.

These faculties assume that their students will learn best the way they themselves learned best - by sitting in class, listening to professors, and reading books. Rarely are students given the opportunity to learn through subjective or practical experiences. While there are some genuinely innovative approaches to teaching and learning, the system of higher education tends to quarantine these innovative models so that, once started, they rarely spread.

As campuses show a steady growth in both size and number, they are being absorbed into large multi-campus systems of remarkable proportions. Efforts are under way in almost every state to formalize systems, and to develop stronger co-ordinating agencies to supervise all of higher education, public and private. While there is still considerable flexibility within higher education, a determined effort is needed to maintain this.

With the problems of college financing becoming more acute, budgets have been receiving increased attention. The study of cost effectiveness, on the other hand, has not been regarded as a subject for legitimate concern. The authors urge that this be regarded as an intellectual problem as well as a financial problem since it must eventually lead to a study of the questions of teaching and learning and to the ultimate question about the nature and purpose of higher education.

During the past twenty years world leadership in graduate education and basic research has passed from Europe to the United States. Since 1948, the number of doctorates granted has increased six times and the amount of research funding has increased nine times. This rapid growth and ready funding have unfortunately brought about distortions. The graduate schools have become steadily more inner-directed and less responsive to the needs of society. There has been too much growth in some fields of low demand, too little in fields where shortages exist. Too many schools have concentrated on training researchers, too few on training practitioners. Recent crises in funding of research and graduate student aid are forcing a reappraisal of goals.

College credentials have become a highly prized status symbol as well as a key to many of the well-paying and satisfying jobs in American society. While educational credentials are often indispensable for getting a job, there is increasing evidence that they have little to do with how well an individual performs a job. Colleges and universities can do much to reduce the over-reliance on credentials. They can study what happens to their graduates, and what the correlations are between academic success and occupational performance. Further, they can break the credentials monopoly by opening up alternative routes to obtaining credentials.

Today American higher education is engaged in one of the most far-reaching reforms of the post-war period--the incorporation of members of ethnic minorities into the mainstream institutions of higher education. Very few studies are presently available to evaluate the results of this programme, but it is obvious that the task ahead is enormous.

The higher education community prides itself on its leading role in the fight to end intolerance in American society, but, with regard to women, colleges and universities practise a wide range of discriminatory practices. They view women primarily as wives and mothers, and their education a preparation for these functions. There are three major types of barrier which block full participation by women in higher education: first, overt discrimination by faculties, deans, and others acting in official capacities; second, practical institutional barriers, such as rigid admission and residence requirements, which make participation in higher education incompatible with many women's other interests and activities; and third, the ingrained assumptions and inhibitions on the part of both men and women which deny the talents and aspirations of women.

The most striking structural development in higher education today is the rapid growth of two-year institutions. These include vocational-technical schools, branch campuses, and community colleges. While these community colleges have many possibilities, they are rapidly being overtaken by the problems already identified.

The Task Force finally reaches the conclusion that higher education in the United States needs reform and to that end makes the following suggestions for new directions:

1. The foremost task for public policy is to create conditions under which new educational enterprises can be founded and can endure.
2. Specific programmes of funding be established that are directed exclusively to encouraging new enterprises.
3. The composition of established accrediting organizations should be changed to include representatives of the public interest.
4. Energetic imaginative individuals must be attracted to careers in higher education and to the entrepreneurial task.
5. The time has come to halt the academic lockstep and reconstitute our colleges and universities as educational institutions for individuals of all ages.
6. The resources for education provided as a package by the college (formal instruction, reading libraries, examinations, degrees, etc.) be provided to the community as separate services in order that individuals and groups can find their own way to an education.
7. Equivalency examinations be developed so that individuals can receive credit and college degrees for skills and knowledge acquired in a variety of ways.
8. There should be established regional television colleges whose mission would be to develop and provide higher education through the medium of television.
9. It is necessary to create conditions that encourage maximum initiative at the individual campus.
10. State Governments should utilize the project grant method of funding for a significant portion of the costs of higher education.
11. Both State and Federal Governments should provide funds to the constitutions (both public and private) in the form of

grants that accompany certain categories of students.
12. More attractive job opportunities should be created outside the academic world so that fewer young people would enter college simply for lack of a better alternative.
13. Colleges and universities must leaven their faculties with practioners who are outstanding in their jobs.
14. National leaders must have the courage to make a realistic and publicly stated recommitment to a broadly based minority education.
15. There must be a national effort to broaden and diversify the participation of women in higher education and to make it more responsive to women's needs.
16. The time has come for a determined effort to strengthen and differentiate the educational missions of our higher education institutions.
17. Foundations and public authorities must assist in the founding of new institutions which can devote themselves to the special missions which must be performed in American education.

Abstract prepared by Dorothy Slawsky, ERIC Processing and Reference Facility, Bethesda, Md.

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The 1970 edition of the Digest of Educational Statistics is the ninth in a series of annual publications initiated by the Office of Education in 1962. Its primary purpose is to provide an abstract of statistical information covering the broad field of American education from kindergarten through the graduate school. In order to perform this function, it utilizes materials from numerous sources, including the statistical surveys and estimates of the Office of Education and other appropriate agencies both governmental and non-governmental. To qualify for inclusion in this publication, material must be nation-wide in scope and of current interest and value. Data extending as far back as 1870 have been employed in many instances in order to provide some historical perspective.

The introduction presents a general picture of the structure of education in the USA. Below the college level three structural patterns are in common use. In the 8-4 plan, pupils spend 8 years after kindergarten in elementary school and 4 in high school. The 6-3-3 plan indicates that, after kindergarten, the pupils spend 6 years in the elementary school, 3 in the junior high school, and 3 in the senior high school. In the 6-6 plan pupils spend 6 years in the elementary school and 6 in the high school. All three plans lead to high school graduation at the age of 17 or 18.

High schools generally can be classified as comprehensive or specialized. The comprehensive high school provides two or more programmes in academic, vocational, technical, or general education in the same school. The specialized high school concentrates on one type of programme. Large city school systems tend to specialize in the high schools, providing separate schools for vocational and technical programmes. Vocational and technical high schools, however, sometimes offer the general subjects usually required for college entrance, so that a student who selects these courses can enter a college or university.

Graduates of the high school may enter a junior college, a technical institute, a 4-year college or university, or a professional school. The junior college normally offers the first 2 years of a standard 4-year college programme and a broad selection of terminal-vocational courses. Academic courses offered by the junior colleges are transferable for credit to 4-year colleges and universities. The technical institute offers post-secondary technical training not leading to professional degrees.

Professional schools, begin at different levels and have programmes of different lengths. For example, medical students must complete at least 3 years of premedical studies at a college or university before they can enter the 4-year course of a medical school; engineering students, on the other hand, can enter an engineering school immediately upon completion of a secondary school programme.

Chapter I provides a broad overview of education, from kindergarten through the graduate school. It brings together materials from elementary, secondary, and higher education to present a composite picture of the educational system. It contains tables which show the total number of persons enrolled in school, the number of teachers, the number of schools, and total receipts and expenditures for education at all levels. Statistics on educational attainment, on illiteracy and school retention rates, and on annual and lifetime income by years of school completed are also included. The following highlights are illustrative of the kinds of information to be obtained from this chapter:

A total of 58.6 million persons were enrolled in school in the autumn of 1969, and they received instruction from 2.8 million teachers.

Approximately 75% of the young adults (25-29 years) in 1969 had graduated from high school, and 16% had also completed 4 or more years of college. The typical young adult had spent about 12½ years in school.

The illiteracy rate among persons 14 years of age and over in 1960 was 2.4%.

More than 11% of the draftees in 1968 failed to meet the mental requirements for induction into the armed services.

Among men 25 years of age and over in 1968, the median annual income of those graduating from college was almost $11,300; from high school, more than $7,700; and from elementary school almost $5,100.

During his lifetime the average college graduate in 1966 could expect an income of approximately $540,000. This was $200,000 more than the average high school graduate and nearly $300,000 more than the anticipated income of a person who dropped out of school after completing the eighth grade.

Expenditures for all levels of education, both public and private, during the school year 1969/70 totalled about $69.5 billion. This amounted 7.5% of the gross national product in 1969.

Chapter II deals with elementary and secondary education. The Office of Education obtains statistics each year from the State Departments of Education on the pupils, teachers, instruction rooms, and estimated expenditures of public elementary and secondary day schools. These statistics show how much progress has been made toward providing universal elementary and secondary education. While regulations may differ from one jurisdiction to another, it is generally true that free public education is available to all and that school attendances is compulsory between the ages of 7 and 16. More than three-fourths of the nation's 5-year-olds are now enrolled in school; from age 6-13 (the usual elementary school age), 99% of the children are attending school; and in the 14 to 17 age group (the usual high school age), 94% are enrolled in educational institutions. Today, about 77% of the young people graduate from high school, and 45% of the young adults expect to enter college.

The largest segment of the school population is found in public elementary and secondary schools. Pupils in the regular public school system account for about 88% of the total enrolment in kindergarten through grade 8, and for 90% of the total in grades 9 through 12. Enrolment in private schools, which grew at a rapid pace in the 1950s, has tended to stabilize and even to decline slightly in recent years. Today, about 1 pupil in 9 is enrolled in a non-public (church-related or non-sectarian) school.

Chapter III deals with higher education. Universities and colleges exist in every State and in all of the larger and more populous outlying areas. Two-fifths of the entire group of more than 2,500 institutions are under the control of State Governments or of cities, counties, or other sub-divisions of States. Seven institutions are controlled by the Federal Government. The remaining 58% of the institutions are controlled by religious denominations, professional organizations, or self-perpetuating groups of public-spirited persons. Publicly controlled colleges and universities tend to be much larger then their privately controlled counterparts. More than 70% of all college students attend public institutions.

A salient characteristic of higher education is its diversity. For example, junior colleges usually offer only the first 2 years of training at the college level; universities, a full undergraduate course in liberal arts, graduate work leading to the doctorate, and courses preparing for entrance into at least two of the learned professions. Between these two extremes are numerous colleges which reflect local needs and purposes.

Degree-credit enrolment in institutions of higher education has increased each year since the early 1950s, rising from 2.1 million in 1951 to 6.9 million in 1968 and an estimated 7.6 million in 1970. This trend reflects not only a substantial growth in the number of young persons of college age but also an increased awareness of the importance of a college education. Each year from 1951 to 1968 there was a rise in the proportion of young people enrolled in college. In 1951 the ratio was 13 college students to 100 persons in the 18-24 age group; by 1968, it was 30 college students to 100 persons in the same age group. Along with the greatly expanded college enrolment, there have been concomitant increases in the number of faculty members, in earned degrees conferred, and in expenditures for higher education.

Chapter IV deals with federal programmes for education. A variety of programmes and procedures are used by the Federal Government to support numerous educational activities. Federal land grants provided under the Northwest Ordinance of 1787 represent the first instance of government financial assistance for education. With this enactment, the National Government embarked upon a programme of educational support unique among national governments in its commitment to state and local autonomy and in the responsibility it assumed for a public function of national interest. Procedures utilized include grants of land, financial grants and loans, allocations of surplus commodities and federally owned property, operation of special educational programmes and institutions, and the cost of services or contracts. This highly complex Federal educational involvement affects, directly or indirectly, every person in the USA and many persons from other countries. Programmes may be for the purchase of research and training services in educational institutions; for support of individuals for whom there is a special federal responsibility; for support of schools in areas where federal activities would result in undue burdens on school services without such support; for support of vocational education, foreign language study, and similar special areas; or for numerous other purposes.

There is no single total for federal funds for education that is meaningful for all purposes, but there are many possible totals which may be constructed to service particular needs. This multiplicity is due to the many kinds of assistance provided, the differences in the manner of distributing assistance, and the special circumstances which describe the programme beneficiary, as each programme was legislatively tailored for its special purpose.

Chapter V consists of a collection of miscellaneous tables which do not fit readily into one of the other chapters. They were selected because they are closely related to education in the USA and are of general interest. They are arranged in five main categories:

1. Data from the Bureau of Labor Statistics on the labour force status and employment of recent high school graduates and drop-outs; other tables provide information from the College Placement Council on the average monthly salaries offered to candidates holding the bachelor's, master's or doctor's degree.

2. Data from the Institute of International Education, American college students and college faculty abroad, and on foreign students enrolled in American institutions of higher education.

3. Office of Education statistics on public libraries, public and non-public elementary and secondary school libraries, college and university libraries, and special libraries; also included are data from *Publisher's Weekly* and the *Library Journal* on trends in the prices of books and periodicals.

4. Data related to the general area of research and development including: the numbers and median salaries of scientists on the National Register of Scientific and Technical Personnel and by type of employer; Office of Education estimates of expenditures for educational research; the amounts and sources of funds used for research and development.

5. Data derived from the Commissioner's Report on *Equality of Educational Opportunity* released by the Office of Education in 1966.

Abstract prepared by Dorothy A. Slawsky, ERIC Processing and Reference Facility, Bethesda, Md.

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federal programme

This annual report, prepared under the direction of the Division of Assessment and Coordination of the Bureau of Educational Personnel Development, on the people who serve the schools and colleges of the United States, covers the two fiscal years 1969 and 1970. The report, required by the Education Professions Development Act (EPDA), concentrates on the problem of educating students from low-income families.

The EPDA gives special impetus to developing an understanding of and a commitment to meet the needs of the economically disadvantaged. In addition, over 15% of the 1970 funds allocated for the development of vocational educational personnel will give attention to developing expertise for working with the handicapped. The 1968 Vocational Educational Amendments provide for the special funding of pilot programmes in all states to familiarize elementary and secondary students with career opportunities.

Of the 50 million children in elementary and secondary schools, it has been estimated that approximately 9 million are in the poverty category. Of the approximately 2 million public school teachers in the USA, about 350,000 primarily teach these children.

The need for pre-service and in-service education programmes for teachers of children of low-income

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families is acute. Current pre-service training programmes that have proven effective are the Cooperative Urban Teacher Education Program, the Fordham University in New York City Program, the Urban Teacher Preparation Program, and the Teacher Corps programs. The Urban/Rural School Development is a new programme of the US Office of Education, which will provide 5-year grants for training experienced teachers in selected poverty schools.

Other methods of solving the problems of these schools are offering premium and incentive pay for teachers, giving the community a share in controlling the schools, the voucher plan, teacher aids, tutoring programmes, administrator training, curriculum innovations, and vocational education improvement.

The priorities and programme directions for EPDA in the fiscal year 1971 (1971-72 academic year) have been organized under four objectives: (a) improving education in schools serving low-income families; (b) improving the preparation of all educational personnel; (c) meeting critical qualitative and quantitative shortages of educational personnel; (d) meeting special needs for educational personnel as they arise and developing and testing solutions for those needs.

Training programmes for higher education personnel will continue to focus on: (a) training junior college personnel; (b) preparation of college personnel to serve the needs of minority and low-income students from educationally deprived backgrounds; (c) training of educational personnel to serve in developing institutions; (d) pre-service and in-service training of high-level college administrators; (e) improvement of undergraduate teaching; and (f) training of educational specialists. In the 1971 fiscal year, it is expected that emphasis will be given to the first three of these priorities.

Statistics obtained in the School Staffing Survey (May 1969) are tabulated; they are compiled from a sample of 712 poverty schools in 48 states and the District of Columbia. The data show that in terms of specific staff shortages, the ratio of all students to various types of specialists was smaller in poverty schools, and the ratio of students with severe learning problems to specialists was larger in poverty schools. The poverty schools are also shown to have much larger percentages of minority group pupils than do non-poverty schools, as well as larger percentages of minority-group teachers; they are less likely to have parent-teacher organizations; have lower total enrolments; those enrolling late are equal to 20% of the autumn enrolment; pupil-teacher ratio is smaller; and a greater proportion of the entire staff is devoted to remedial reading. The over-all comparisons show that while poverty schools receive more special staff for each pupil enrolled, they are receiving less staff in relation to the number of pupils with actual need; poverty elementary schools provide the greatest access to the greatest variety of health services; and expressed needs for clerks and classroom teachers are larger for poverty schools.

Statistics for 1968 reveal that teachers in both poverty and non-poverty schools in large cities separate from the profession at about the same rate; generally there are more inexperienced teachers in poverty elementary and secondary schools than in non-poverty schools and 5% of the elementary and secondary poverty school teachers had less than full certification, as compared with 2% in elementary and 1% in secondary non-poverty schools.

In schools that serve Mexican-American students, the teachers and other professionals are generally of poorer quality than are those in predominantly 'Anglo' schools. The staffs of the Mexican-American schools are often unable to deal effectively with the cultural patterns of the children, and do not take positive advantage of the children's attitudes and aspirations. The National Advisory Committee on Mexican-American Education has recommended the training of 100,000 bilingual-bicultural teachers and administrators to meet the needs of these schools. The Bureau of Educational Personnel Development has established an Advisory Committee of 30 Spanish-speaking professional and community people who advise on programme direction and development for bilingual and bicultural students, as well as assist in educational personnel project development and support.

The staffing problems facing the 2-year colleges are caused by the short supply of interested, trained, and available teachers, counsellors, and administrators. The concern for improving the preparation of junior college staffs through specific pre-service programmes has been shown by the National Defense Education Act and the EPDA. Many of the major 4-year colleges and universities are developing programmes to meet the needs for teachers, guidance and student personnel workers, and administrators. The teacher training institutions will inevitably bear a heavy responsibility for developing 2-year college staff members. The role of the state agencies is to provide leadership which will enable individual institutions to discharge their obligations to new students. The Federal Government exercises leadership in the following ways: through the Higher Education Personnel Training Program; the Strengthening Developing Institutions Programs; and the proposed administration bill, HR 16621, which includes title VII, the Career Education Act. The next few years may well determine the viability of the 2-year institutions for serving urban communities in which so many poor families reside.

Federally supported vocational-technical education comprises the bulk of the country's training programmes designed to reduce unemployment and occupational shortages. This support currently focuses on six occupational areas: office education; distributive education; trade and industrial occupations; technical education; agricultural education; and health occupations education. The most rapid relative growth from 1963 to 1969 was in post-secondary vocational education and vocational services for persons with special needs; however, secondary school and adult enrolments still represent 90% of the total.

In addition to the federal programmes, vocational education is being conducted by private schools. It is anticipated that there will be increasing support for the 'cluster' or 'career development' curriculum. The cluster approach will require a new kind of teacher training and there will be an acute need for paraprofessionals.

Enrolments in all programmes, both public and private, of vocational education projected to 1975 are 19,170,000; the projection for teachers is 448,300. The thrust of federal support should be at the secondary school level, and, to a lesser extent, at the elementary and post-secondary levels. Vocational educators should make every effort to establish continuing lines of communication with labour, industry, and the community. If teaching personnel requirements are to be met, consideration must be given to expanded in-service training programmes and an easing of certification requirements.

Programmes supported under the EPDA in the 1969 and 1970 fiscal years are described in Appendix A, and Appendix B discusses the supply of and demand for teachers. It is believed that the 1970-71 school year will be the first in which there will be a general surplus of teachers.

Abstract prepared by Dewece Bellman, ERIC Processing and Reference Facility, Bethesda. Md.

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Author National Center for Educational Research and Development (DHEW/OE), Washington, DC.

Title *Educational research and development in the United States*

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This volume grew out of a report entitled "National Science Policies", issued in 1967 by the Organization for Economic Cooperation and Development (OECD). More specifically, it was undertaken in response to a formal request to the United States Office of Education by OECD's Committee on Scientific and Technical Personnel, to review American educational research and development and delineate its historical patterns, present status, and lines of possible future growth. The final version of this report was completed in June 1969.

The purposes of the review are:

To offer an opportunity for the member nations of OECD to examine in some detail the experience of the USA in educational research and development.

To help United States officials acquire a better, more explicit understanding of the scope of the educational research and development activities in the USA.

To stimulate these officials to analyse and refine the data base and conceptualizations regarding the activities for which they are responsible.

To help the Office of Education research programme, the largest single component of the total education research and development effort in the USA, to move in directions of greater sophistication, value, and impact.

The material presented in this study focuses on these questions: Can science provide the basis for the improvement of instruction in education? Should the use of science to improve education constitute a high priority policy determination? Assuming that the first two questions can be answered affirmatively, what are the elements to be considered in developing an over-all strategy for the support of research and development in education?

Analyses of research and development (R & D) in education, as in other fields, draw upon a considerable body of knowledge and discussion. The sphere of education is an arena for the interaction of diverse social and political forces and a problem area which can lend focus for study, inquiry, and improvement. The object of research activities is to discover, reinforce, or refine knowledge, i.e., to devise better conceptual models for describing interrelationships among variables, to establish the direction and nature of so-called 'cause-and-effect' interactions and to disseminate information.

Existing educational models fall into three major categories. The first category, linear or dependency models, tends to view the goal of educational improvement as being dependent upon adequate diffusion mechanisms. A second model sees essential differences and disconnexion between the research, development and dissemination functions. A third model might be termed a linkage model because it stresses the close interrelations of research, development, and dissemination. R & D models provide the framework in which work is done and therefore affect the decision-making process. The model utilized implicitly throughout this document is oriented strongly toward the decision-making requirements of the sponsor or administrator of research and development for education.

Education in the USA is a vast co-operative enterprise, regarded as an inalienable right which should be available to all children. Due to legal and Constitutional circumstances, many systems of education, both public and private, exist. The relationship among federal, state and local governments in this field may be described as a partnership in which each has participated in varying ways and degrees in the establishment and support of education.

With the basic organizational and structural features of American education in mind, the full dimensions of the educational establishment in the United States can be brought into view through a presentation of a variety of statistical treatments of enrolment, financing, and educational outputs. Enrolment levels, instructional staffs, high school and college graduates, school retention rates, educational attainment and school income and expenditures have been increasing continually during the present century. Equality of educational opportunity, needs surrounding urban education, teacher unrest and militancy and the relevance, control, and improvement of education are issues confronting America today.

Education became a topic of continued and serious scholarship in the mid-1850s and after. The 1890s became an age when education became a matter for scientific investigation, controlled experiment and rational reform. Perhaps the most important of the contributions of this period was the widespread acceptance of pupil accomplishment as the fundamental test of educational programmes. In the early part of the 20th century, 'action research' was a new kind of activity which absorbed at least as much professional effort as more conventional inquiry and attracted far more attention in the schools.

The events from 1954 on are in large measure the events of the present. In 1954, the 83rd Congress passed the Cooperative Research Act authorizing the Commissioner of Education to enter into financial agreements with colleges, universities and state educational agencies for research, surveys, and demonstrations in the field of education. Sponsors for Educational R & D include the Federal Government, state and local educational agencies, private foundations, industry and business, colleges and universities, and professional and academic associations. The number and variety of sponsors is matched by an even richer array of performers and instrumentalities for conducting research, development, demonstration, dissemination, and research related manpower development activities for education. The bulk of this work is performed by persons affiliated with colleges and universities.

A survey of the present status of educational research and development in the USA must include consideration of management and decision-making strategies employed by sponsors of educational R & D. The focus on management arises quite naturally from the need to: (a) identify goals and priorities; (b) derive specific objectives, consider alternatives and allocate resources; (c) administer the resulting projects and programmes; and (d) evaluate the findings and products.

Effective management of the R & D enterprise for education requires fairly accurate knowledge of the financial and manpower resources available for such activities. Financial resources known to have been available for educational R & D from all sources in fiscal year 1968 was approximately $192.3 million.

No systematic analysis of the whole of educational research and development existed at the outset of this study. As part of this policy review, however, it was decided that an attempt would be made to apply a revised version of a multidimensional taxonomy developed by the Bureau of Research (US Office of Education) to the full range of research and development activities in education sponsored by federal, state and private sources.

Assessment of the effects of R & D on American education can be approached in two ways. The first would consider general questions of the degree to which behavioural and social science knowledge correlates with observable changes in instructional practice or the organization and administration of schools. A second approach seeks out specific innovations growing out of research or developed through rigorous scientific procedures of design, constructions, and trial, and then attempts to ascertain the degree to which such innovations have in fact been adopted by schools and colleges across the country. Both approaches have been followed and are supplemented by a special survey commissioned for this report. The present status of educational R & D in the USA is reflected in reports of recent research assessments. A considerable range of surveys, studies, and reviews of educational research and the behavioural and social sciences having direct and indirect bearing on the subject of this report have been undertaken.

Research and development ultimately affect educational policy. A substantial amount of work over the years has been done exploring cognitive processes. The research suggests the critical role of early stimulation in intellectual development. Considerable activity has been aimed at redesigning instructional programmes and techniques to tailor them to individual needs and requirements. Research bearing on the professional roles of educators focuses on such areas as teacher effectiveness, teacher role and teaching methods. A significant body of research bears on the effect of non-instructional variables on educational attainment.

The conclusions of the report are as follows:

1. No over-all strategy currently governs the support and growth of educational R & D in the USA.

2. The financial resources available for educational R & D are inadequate.

3. Manpower supplies are barely adequate to carry out the range of activities currently being supported in educational R & D.

4. Despite the fact that the present study contains more quantitative data than has ever been presented before in a review on educational R & D, there is much to be done in many areas to improve data inadequacy: for example, estimates for financial support, detail and specificity in analyses of trained manpower, taxonomies to describe educational R & D, mechanisms for systematic collection of data.

Abstract prepared by Catherine Kokkinis, ERIC Processing and Reference Facility, Bethesda, Md.

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Author: Froomkin, Joseph

Title: *Aspirations, enrollments, and resources. The challenge to higher education in the seventies.*

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Co-operative Educational Abstracting Service (CEAS)

This study attempts to estimate the federal resources required to fulfil the aspirations of Americans for post-secondary education. It draws up two possible levels of support for 1976: (a) one budget just to meet the nation's minimum aspirations, $1.8 billion for a student support, with possibly another $2.0 billion for institutional support; and (b) another budget which is more likely to allow the poor to participate in post-secondary education on an equal footing with the well-to-do, i.e., $3.5 billion for student support, plus $4.5 billion in institutional aid.

The study first deals with the arguments which bolster federal concern for higher education. These are: (a) higher education produces a pool of highly skilled manpower needed to support technological progress; (b) additional education enhances the effectiveness of the labour force and hence adds to the gross national product; (c) post-secondary studies are an avenue of social mobility, and it is reasonable for the Federal Government to remove the barriers to upward advancement that exist because of low parental incomes; (d) part of the return in terms of high incomes to persons attending post-secondary institutions results from (i) their investment in more education, (ii) their superior ability, and (iii) the shortage of persons with these skills; and (e) intellectual excellence in a society depends on a strong post-secondary education system.

The next chapter summarizes the findings of Jaffe and Adams (1964) on college attendance trends between 1880 and 1950. It was found that roughly 5 out of 10 white male high school graduates were likely to enrol in some post-secondary institution and that the ratio was 4 in 10 when applied to white females (graphs are shown to support these findings). As a result, the Federal Government introduced new legislation to encourage attendance at post-secondary institutions. A second survey studied the aspirations of parents and high school seniors in 1965 and found that the aspirations by income group had changed significantly between 1959 and 1965 (numerous tables give a breakdown of this data).

The results of a projection of the demand for post-secondary education for the period 1968-76 are then given. Two projections are presented. The key factors which will affect college enrolments in the next few years are: (a) the propensity of high school graduates with different levels of academic achievement and financial resources to enrol in college; (b) the time schedule by which they enrol, i.e., immediately after high school or a number of years later; (c) the persistence rates of different types of students; and (d) the availability of student aid. A model is presented taking into account the first three factors. A second model is tested for its validity in forecasting past enrolments.

One may gain some insights into the possible role of federal policy in equalizing resources by looking more closely at this diversity. Approximately 7 million degree and non-degree credit students were enrolled in institutions of higher education during the 1967-68 academic year. About 60% of all class-hours were offered in the fields of the social sciences, business, law, liberal arts and humanities. More than one-third of all class-hours were offered by institutions located within the major metropolitan areas. Some 58% of all class-hours were offered in the first two years of undergraduate level. Over-all, the utilization of classrooms appeared to be higher in the public than in the private sector. A case study of the Oklahoma State System reveals that (if this experience is typical): (a) elite institutions tend generally to have higher costs; (b) these cost disparities are widening; and (c) two-year institutions with high initial costs generally evolve to produce a 'standard' credit-hour less costly than the elite institution.

Several tables give a breakdown of data derived from a nation-wide analysis of instructional and total costs per student by type of institution. Student subsidies are analysed as are subsidies by socio-economic group and institutional deficits. The cost developments studied do not give a clear-cut answer as to whether there is a crisis in the financing of higher education. However, the over-all studies of the present subsidy pattern by income quartile of students indicates that the system does not favour the rich over the poor.

The relationship between student outcomes in higher education and measures of student and institutional quality is examined. The student outcome variable is represented by the percentage of students who have been motivated to continue their studies beyond the batchelor's degree. Two previous attempts to measure the quality of post-secondary institutions are discussed. The present analysis of institutions is based on coverage of 273 institutions of higher education that appear to recruit above-average students compared to the majority of post-secondary institutions. Factors considered in this study were: expenditures per student; tuition per student; enrolment; research staff; faculty-student ratio; proportion of faculty with doctorates; percentage of male students; percentage of teachers produced; Scholastic Aptitude Test scores; percentage going on to graduate school; and number of doctorates. A linear regression model was used to attempt to explain percentage of seniors going on to graduate school during two time periods. Tables showing these relationships are given.

The precipitous growth of higher education enrolments, which amounted to 45% between 1961/62 and 1965/66, was unevenly distributed between public and private colleges. While enrolments in publicly controlled institutions grew by 55%, enrolment in privately controlled schools increased by only 25%. Scholastic Aptitude Test (SAT) scores for students entering private and public institutions are compared, as are admission policies. On the whole, the post-secondary educational system deserves recognition for responding to the demands of the market. Apparently students of similar ability enrolled in similar institutions in both 1962 and 1966.

In the past year, two issues have dominated the discussion about federal policy for graduate education: (a) the level of federal support to graduate students, and (b) the impact of the draft on graduate enrolments. This document is mainly concerned with the first issue.

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The objectives and desirable levels of federal support for graduate education and research have been justified by the national drive for pre-eminence in the physical sciences. Data indicated that persistence in post-secondary education is related to both high school achievement and parental income. It is argued that a principal concern for the federal policy planner at the outset of the 1970s should be to understand the various forms of graduate support, as well as its distribution among students in various disciplines. Graduate student support comes from a variety of sources: (a) scholarships and fellowships financed by the Federal Government, institutions, or business firms; (b) research and teaching positions; (c) other earnings. Examination of the trends in graduate student enrolment and financing indicates how well the affluent American society can cater to the desires of persons for graduate education. The important role played by the Veterans Administration (V.A.) in graduate student financing should be watched closely by planners interested in federal policy on graduate students.

Two general approaches have been developed to provide financial aid to institutions of higher education: (a) categorical aid, i.e., grants to institutions for specific purposes; (b) general aid, i.e., unrestricted grants proposed to institutions of higher education and based upon certain institutional criteria, such as a percentage of expenses, or the number of students receiving instruction. Tables giving relevant data on educational financial aid are presented.

Equality of opportunity in post-secondary education may be defined in a number of ways and several criteria can be used to measure it such as social origins, ability, and aspirations. The concept of equality of opportunity in post-secondary education is further complicated when one considers not only the requirements for entry, but also the conditions of attendance, i.e., full-time or part-time enrolments, as well as differential rates of continuation in college, which influence the students' chances of completing the college course. The effects of the following are summarized: failure to graduate from high school; differences in attainment due to differences in achievement in high school; and impact of differential entrance and persistence rates. Different levels of required student aid are based on three assumptions: present pattern of average expenditures; minimum outlays needed to attend a public institution full time; and estimated patterns of actual expenditures by college students. It is concluded that the meeting of minimum needs and actual needs of students is likely to produce widely divergent estimates of student aid requirements. Projections indicate that aid requirements will be increased by $784 million in 1976.

One of the great imponderables in projecting the cost of the post-secondary system is the extent to which funds will be found to finance the rising expectations of students. The absence of recent information on cost developments hinders the making of precise forecasts of the future. However, if the projections made here are realistic, the increases in institutional deficits in the next five years will range between $2.0 and $2.5 billion. The impact of several subsidy plans and incidence by income quartile is examined, and an attempt is made to relate them to the over-all pressures of higher education outlays on family finances. It is concluded that targeted student financial aid will have to grow quite substantially to a volume of at least $2.2 billion for undergraduates, and an additional $0.8 billion for graduates by 1975/76.

Eight appendices are included. Appendix A develops a theory of subsidy - the necessity of looking at the effects of educational investment serially, rather than in terms of simple inter-temporal analyses, is emphasized. Appendix B describes the enrolment model for 1960/76. Appendix C lists colleges by control and level of programme offered. Appendix D lists correlation tables by control and level of programme offered. Appendix E presents 21 variables collected for a sample of 101 higher educational institutions and for two sub-sets of the total sample. Appendix F presents financial assistance requirements estimated on three alternative bases in the model for low and high enrolment projection. Appendix G gives price indices for educational expenditures, and the last Appendix, H, presents supplementary statistical tables.

Abstract prepared by Catherine Kokkinis, ERIC Processing and Reference Facility, Bethesda, Md.

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Author Consejo nacional de desarrollo

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Translation National plan for development and security 1971-1975: chapter on Education

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The Government based its planning system, from 1966 onwards, on three organizations: the Consejo nacional de desarrollo (National Council for Development), the Consejo nacional de seguridad (National Security Council) and the Consejo nacional de ciencia y técnica (National Council for Science and Technology), known respectively as CONADE, CONASE and CONCYT. Each of these bodies comprises Ministers of the Executive Authority, presided over by the President of the Republic, and they have a Secretary-General with the rank of Secretary of State. The chief responsibility of these organizations is to draw up the main lines of the national policy, on the basis of previous studies, in accordance with modern planning techniques. In addition to these functions they have published the document from which the chapter on 'Education' is abstracted here, as approved by the National Executive Authority on 14 May 1971.

The chapter has four main parts: introduction, objectives, targets, and measures. The introduction summarizes the diagnosis of the present educational and cultural situation. Up to about the middle of this century, the Argentine Republic reached a satisfactory level of educational and cultural development, due mainly to the firm action taken by the country between 1853 and approximately the end of the last century. The present situation is less favourable and not very suited to vigorous cultural development on a national scale, for the following reasons: (i) lack of appropriate cultural policy, especially with regard to the promotion and presentation of our own forms of culture and, in addition, an all too obvious dependence on external cultural forms; (ii) the education system is complex and lacks co-ordination in its institutional and administrative structure owing to simultaneous direction by various authorities at the national, provincial, municipal and private levels; (iii) inadequate resources and inefficient use of them; (iv) in spite of a satisfactory level of school enrolment there is a low level of retention - this is one of the essential aspects of the diagnosis (it is estimated that at the primary level 92.6% of the children of school age are enrolled but only 58.3% finish the course; at secondary level the enrolment rate is 28.4% but retention rates reach 55%, 22% and 41% for the general, technical and agricultural sectors, respectively); (v) educational opportunities are dependent on regional and social differences; (vi) the curricula are rigid, out-of-date and of little educational value; (vii) scant diversification and inappropriate distribution of the education provided; (viii) the qualitative output is inadequate for national development needs.

The most significant of the cultural and educational objectives with, in some cases, an explanation of the measures proposed for achieving them are as follows. Firstly, the expansion of the education system at all levels, for which it is proposed, among other measures, to extend the duration of compulsory schooling to nine years. Secondly, the democratization of the system for which purpose regional and social differences would have to be overcome. Then there is the modernization of the system, through the implantation of a new educational structure, the reform of curricula at all levels, and the use of technical teaching aids. Fourthly, the diversification of education and the generalization of professional and technical qualifications, through the introduction of a new bias and of new procedures, specialities and courses, at the secdary and higher levels and the incorporation of vocational and technical training throughout the system.

Mention is also made of two further objectives which are of great importance in the tradition of educational policy in Argentina, as they affect two long established aspects of this tradition: (i) the integration of the educational system which requires joint participation by the State, the provinces, the municipalities and the private sector in the building up of a suitably flexible system; and (ii) the decentralization of educational administration, for which numerous measures have already been proposed, which, once applied, will result in profound changes in the age-old patterns followed in the country. Among others, mention may be made of: the transfer of basic educational services to the provinces; the conferral of greater powers on separate school units; participation by the community in school administration and reservation to the Ministry of Culture and Education of the functions of policy-making, research, experimentation and planning.

There follows a description of the targets to be reached during the period in question (1971-75). In the case of pre-school education it is hoped that the present enrolment rate of 12.1% will be increased to 30%. Efforts are being made in respect of basic education (lower primary and upper primary) to raise the duration of compulsory school attendance to nine years, as a result of the new organization of the education system. It is hoped that by 1975 the enrolment rate for 6-year-old children will be 95%, and statistical tables are included showing enrolment trends at the pre-school, lower primary and upper primary levels. As regards secondary education, attempts are being made to enrol larger numbers of the population of appropriate age, by overcoming social and economic difficulties and by providing a wide choice of courses. The retention rates are also to be improved, and statistical tables are included to show this. In higher education, it is hoped to raise the present enrolment rate of 7.2% to 15.5% by 1975.

Lastly, there is a description of the measures recommended for reaching the proposed targets. It is suggested that, for the development of the national culture, the cultural services should be planned in such a way as to allow of effective co-ordination of the activities of the different organizations and institutions in the official and private sectors; study and updating of the laws and regulations on the fundamental components of culture; better buildings and appropriate equipment which would make it possible to establish a satisfactory cultural infrastructure; intensification of technical assistance within the country, and development of a policy for the use of mass communication media, both in the official and the private sectors.

With regard to the expansion of the education system, a number of practical measures are proposed concerning an extensive plan of re-equipment in respect of buildings and facilities for education at all levels. It should be pointed out that reference is made, as a measure already taken in 1971, to changes brought about in the earlier systems of teacher training through the establishment of new higher teacher training institutes. Several measures are also described concerning further training for teachers already serving, and teachers' salaries and working conditions in general. There is a reference later to the most important measure relating to the reform of the education system: the institution of an educational structure comprising a common basic education, compulsory and free of charge, extending over a period of nine years and divided into two levels: lower primary (5 years) and upper primary (4 years); a diversified secondary education extending over a minimum of three years, and, in addition to higher education, a system of lifelong education.

Abstract prepared by Professor Luis J. Zanotti, University of Buenos Aires.

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Author	Argentine Republic. Ministerio de Cultura y Educación
Title	*Resolución 2321 - Creación de los Institutos Superiores de Formación Docente.*
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Translation	Resolution 2321. Establishment of Higher Teacher Training Institutes.
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In the Argentine Republic, the systematic training of primary school teachers began in 1870 with the foundation of normal schools, secondary-level establishments whose courses of study, after a few initial variants, were fixed at four years. This arrangement was changed in 1942, when it was decided that teacher training would be given in a two-year cycle after a three-year basic cycle of secondary education. This system was abandoned in 1969 and in October 1970 the Ministry of Culture and Education passed Resolution 2321 setting up the Higher Teacher-Training Institutes, establishments at the third level, which in 1971 began training lower primary school teachers, with a two-year curriculum.

The message accompanying the draft resolution sent by the Under Secretary of Education to the Minister points out that the plan presupposes a general cultural background, acquired at the previous levels of schooling, to which it adds a complement of scientific knowledge and a grounding in philosophy and humanistic subjects. No claim is made, he states, to turn out a 'completely trained' teacher, but one prepared to continue taking in-service training and refresher courses. Lastly, he mentions three basic aspects of the plan: the 'modernity' of its approach, its 'flexibility', and the 'full-time' system for practice teaching.

Annex I: Curriculum. The curriculum comprises: (a) 12 compulsory subjects, of one academic year each, divided into three basic groups; (b) 5 elective activities, of which the student is obliged to choose a minimum of 2, each lasting for a four months' period. The compulsory subjects are as follows: theory of education; theory of learning; psychology of development; elements of philosophy; language and literature; mathematics; physics and chemistry; biology; social sciences; manual and aesthetic training; physical education; school organization and administration. The elective activities include: a seminar on regional social, economic and cultural problems; a seminar on contemporary problems in education; evaluation techniques; preparation of teaching material, and use of audio-visual aids and library techniques; speech and voice control.

The content of each subject is then described, but the programme details are not given. One of the distinctive features of the curriculum is precisely the freedom left to the teachers to draw up detailed programmes in their respective subjects. This constitutes a radical change in the educational tradition of the country, although such freedom already existed in teacher training institutes at the third level.

Annex II: Structure and organization of the institutes. (a) Students. They must have completed their studies at the secondary level in some branch of the national school system. This constitutes one of the most important innovations contained in Resolution 2321, for the following two reasons. The first reason is that it has been decided for the first time in the history of the country that the training of primary school teachers shall be based on the completion of secondary studies. Between 1870 and 1941, students who had completed primary school were accepted for teacher training courses. From 1942 to 1969, graduates of the first cycle (three years) of secondary education were recruited for these courses. Now, beginning in 1971, completion of the entire level is required. The second reason is that graduates from *all* branches of secondary education, including schools of a technical nature, will be accepted. This experiment is of a kind hitherto unknown, not only in Argentina but in most other countries. (b) Quantity. A minimum of 25 students is required for each course, and division into two shifts is authorized when the number of students exceeds 60. (c) Authorities. Under this heading are listed the procedures for the temporary appointment of rectors of the institutes that are to be established, in accordance with the characteristics of the education system and its statutory regulations. In every case there will be a rector and possibly a co-ordinator of courses. (d) Teaching staff.

After setting forth the regulation procedures to be followed in appointing teachers, a list is given of the qualifications they should possess, of which the main ones are as follows: (i) a degree awarded by a third-level teacher training institute or by a university; (ii) specialization in their subject and experience in secondary or higher education. (e) Private institutes. Establishments of a private character will be admitted if they conform to the legal standards and general regulations for all private education in effect throughout the country. (f) Salaries. In accordance with the provisions of the Teachers' Charter (Law 14473) teachers in these establishments will receive a salary based on index 4 per hour/week of classroom teaching. This means that they will be paid exactly twice the salary of teachers at the secondary level. (g) Auxiliary staff. Each establishment will be provided with a secretary-treasurer and a janitor. (h) Educational system. From the point of view of comparative educational studies, this is one of the main items, because it is where the academic and pedagogical characteristics of the new teacher training institutes are ultimately defined. It begins by stating that the 'syllabus shall be adapted to the standards of higher education' and adds that it shall foster 'study and research work both by individuals and by groups of students'. It seeks 'active participation by the students in the learning process and attitudes of critical analysis, innovation and dialogue'. The academic year is to consist of 30 weeks of classes divided into two four-month terms. Student attendance will be calculated by subject and hours of classroom presence. A minimum attendance of 75% will be required. Evaluation for promotion purposes will be based upon partial and final examinations. In this respect the system follows customary university practice.

The number of hours per week devoted to each subject will be as follows: theory of education, 4; theory of learning, 4; psychology of development, 3; elements of philosophy, 3; language and literature, 4; social sciences, 2; school organization and administration, 4; physics and chemistry, 2; biological sciences, 2; manual and aesthetic training, 2; physical education, 2; four months' elective activities, 4.

Lastly, mention should be made of the novelty which the system of practice teaching introduced by these institutes represents. Previously, in the curricula in force from 1942 to 1969, students in the normal schools were observers in the fourth year and gave practice classes in their fifth year approximately once a week in the demonstration primary school attached to the normal school where they were studying. The new system makes a four months' period - i.e. a term - of full-time teaching compulsory at some ordinary primary school in the area. During this teaching period, under the guidance of his teacher and the supervision of the principal of the establishment, the student will perform all the usual tasks of a primary school teacher.

Abstract prepared by Professor Luis J. Zanotti, University of Buenos Aires.

Classification (for the use of receiver)	Country Bulgaria	CEAS No. 82
	No. 5	Date of issue December 1971

Author	Čhernev, M.; Marinov Ju ; Stamenov, M.
Title	*Učilištnoto stroitelstvo v Bulgaria 1944-1969*
Bibliographical data	Sofia, Narodna Prosveta, 1970, 144 p.
Translation	School construction in Bulgaria 1944-1969
Keywords	Bulgaria school construction building standard school facilities university campus

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After the Second World War the establishment of the people's power in Bulgaria was accompanied by an educational upheaval: it was now the major task of education to turn out in the shortest time possible the great number of specialists that were needed for the rapid economic and cultural development of the country. Primary education became compulsory, the network of schools of vocational and technical education grew steadily and day nurseries and kindergartens were opened. In order to meet growing educational needs the Government has made great efforts in the way of school construction. In the 25 years from 1944 to 1969 over a thousand school buildings of various types were built. The present work summarizes the results obtained during this period and analyses the means whereby this work of construction was carried out.

In the post-war period, education has been oriented towards polytechnical education and work. The main aim of education is not only the transmission of knowledge, but also the formation of the working habits, aptitudes and skills required to prepare young people for socially useful work and to make them physically fit, to develop their aesthetic sense and tc accustom them to active social life. New school buildings must meet these requirements.

With a view to standardizing the equipment of schools of various types and level, State standards and regulations for the design of schools of general education and their construction were issued in 1960. These were revised and augmented in 1962 and 1965. They divide the various types of classroom and their equipment into a number of categories. In addition to ordinary classrooms provision is made for physics, chemistry and biology laboratories, music and art rooms and wood and metal workshops. Schools have their own gymnasia, pioneer organization rooms and youth clubs, as well as kitchens and dining halls.

A number of schools known as 'central schools' because of their geographical position make provision for boarders. There are also a large number of special schools for convalescents and schools where the teaching is given in a foreign language; all have boarding facilities.

There are pioneer camps and camps for secondary school pupils where the young can spend their summer holidays. Some of these camps are provided with light buildings that are used all the year round.

Vocational education and the building of vocational and technical schools are particularly encouraged. In addition to ordinary classrooms there are specialized workshops and laboratories, depending on the type of establishment.

As a means of speeding up school construction, standard designs have been prepared for various types of schools of general education, kindergartens, pioneer camps, boarding establishments, gymnasia, kitchens, dining halls and workshops. These designs are drawn up by specialized design offices, which are located in each regional centre. In the case of large school buildings individual plans are worked out by the design offices. The Ministry of Education exercises methodological control when the school plans are being drawn up. In special cases, competitions are organized.

School construction is financed by the State and carried out by specialized State bodies. In the case of units of lesser importance, the local councils (People's Councils) can also participate in the financing of school construction work with their own money.

Problems of school construction are treated with particular care, and matters of special importance relating to the furnishings, fittings and layout of school buildings are submitted to research centres. The Research Institute for Town Planning and Architecture has published a series of studies on various types of school.

During the post-war period there has been a rapid expansion in higher education. In 1944 there were 5 establishments of higher education but this figure rose rapidly to 26; these establishments are distributed between seven university towns. The student population has also risen, and at present Bulgaria has one of the highest per capita student populations in the world. The need to train graduates in all fields demanded the rapid construction of university buildings. Thus, the Higher Institute of Agriculture, the Higher Institute of the Food Industry, the Higher Institute of Medicine at Plovdiv, the Higher Institute of Chemical Engineering at Burgas, the Higher Institute of Mechanical and Electrical Engineering and the Higher Institute of Medicine at Varna were all built in a relatively short period. Other units are under construction. In Sofia, work has begun on the construction of a campus with a capacity of 30,000 students, making it one of the largest in the world. It is primarily destined to become a centre for the higher technical schools. The first stage of the work on the campus has already been completed, and it at present accommodates over 7,000 Bulgarian and foreign students. When it is finally completed this complex will include everything needed by the student population including halls of residence, dining halls, library, health centre, cultural centre, cinema, supermarket, car parks, sports grounds, swimming pools, etc. Special accommodation will be available for married students and day nurseries for their children. It is planned to accommodate the teaching staff near the university. The campus, which is unique in scale and has been generously financed by the State, is due to be completed by 1980.

The characteristic feature of construction in the country is that it is carried out according to plans prepared in advance and approved by the legislative institutions and State bodies after thorough study. Each year the National Assembly makes the necessary appropriations for the year to come within the framework of the five-year plan. The sixth five-year plan (1971-75) provides for the expenditure of 500 million levas on school construction.

Abstract prepared by Ivan Marinov, Head of the Section Educational and Children's Establishments Section and Chief Officer of the Directorate of Construction at the Ministry of Education, Sofia.

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Classification (for the use of receiver)	Country Bulgaria No. 6	CEAS No. 83 Date of issue December 1971

Author Ministerstvo na narodnata prosveta

Title *Pravilnik za stipendiite v učebnite zavedenija*

Bibliographical data *Bjuletin*, Ministerstvo na narodnata prosveta (Sofija), br. 2, 1971, p. 15-35.

Translation Ministry of Education. *Regulations concerning educational grants*

Keywords
Bulgaria
educational legislation
study grant
scholarship

These regulations were issued in accordance with Article 2 of Decree No. 30 issued by the Council of Ministers on 21 June 1968 and with Order No. 22 issued by the Committee of Economic Co-ordination on 24 January 1970, and replace the regulations concerning educational grants of 1968. The regulations and the model contract annexed to them will enable all ministries, organizations and regional People's Councils to solve according to a uniform and pre-established pattern the problems arising out of the award and payment of grants. They are also intended to aid young people and their parents.

Chapter I sets out the general requirements that candidates for grants must meet - conduct, performance and material circumstances. It deals with all matters to do with the payment of grants during the summer holidays, practical work, sick leave, pregnancy and maternity leave (for students in institutions of higher and upper secondary education), etc.

Chapter II sets out the monthly amounts for the different categories of grant (ordinary and special). Ordinary grants are paid by educational institutions, unions, enterprises, factories, agricultural enterprises - State farms and agricultural co-operatives - and the regional People's Councils. The size of the grant depends on the scholastic performance and the material circumstances

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of the candidate and on the type of educational establishment: establishment of secondary education (polytechnical school, technical college), vocational or vocational and technical school, institution of higher or upper secondary education. The purpose of the ordinary grant is to solve the problems of the everyday life of the students; they also act as incentives to academic performance. Special grants are awarded to pupils and students who show special ability, to young people taking an active part in sport, to students studying abroad, to foreigners studying in Bulgaria, etc.

Chapter III sets out the terms on which grants may be awarded - documents to be produced, priorities, entitlements (excellence of academic results, candidates from families with three or more children), etc.

Chapter IV sets out the conditions under which grants may be suspended or stopped. In the case of final-year pupils or students the grant is terminated after the first session of the school leaving certificate or the State examination, in other words, at the end of the academic year. Scholarships may be suspended during the course of the academic year if there are more than two cases of unsatisfactory marks during the term, or in the case of indiscipline, misconduct, irregular attendance, etc.

Chapter V sets out the obligations and responsibilities of students in receipt of grants. After completing their studies they must work at least three years in a place to which they are assigned. This obligation is for four years in the case of students who have received their grant under a contract with a union, enterprise, factory, or agricultural enterprise. Grant holders who abandon their studies without a valid reason or who on the completion of their studies do not work at the place to which they have been assigned pay back the State the total amount of their grant and tuition fees.

Chapter VI sets out the control and accountancy measures to be taken in regard to grants in educational establishments. All documents that have served for the award and payment of grants are checked. In the case of infringements, the controlling bodies impose penalties on those responsible. Penalties are provided for under the law on financial inspection and other administrative enactments. Each educational institution has its own office which deals with grantees' accounts.

Chapter VII sets out various special and temporary provisions. They deal with matters affecting certain categories of grant holders for which provisions are made by various administrative enactments other than those contained in the regulations concerning grants.

The model contract which is annexed to the regulations sets out the general terms and conditions governing the relationship between the unions, enterprises, factories, etc., and candidates for grants.

Abstract prepared by Georgi Giočev, Chief Specialist of the Forecasting and Planning Section, Ministry of Education, Sofia.

Classification (for the use of receiver)	Country Bulgaria No. 7	CEAS No. 84 Date of issue December 1971

Author

Title *Nacionalno saveštane po vaprosite na učilištnoto i profesionalnoto orientirane*

Bibliographical data *Naradna prosveta* (Sofija), br. 3, 1971, pp. 3-91

Translation National conference on educational and vocational guidance

Keywords
Bulgaria
educational guidance
professional guidance
State responsibility for education
out-of-school activities
educational research

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Problems of educational and vocational guidance were discussed at a national conference held in Sofia in January 1971. It was attended by officials responsible for educational and vocational guidance at the various administrative levels, officials from the People's Councils, the teachers union, the youth and sport commissions, school principals and teachers, and doctors. Narodna prosveta, the journal of the Ministry of Education and of the Union of Bulgarian Teachers, devoted a whole issue to the conference, reprinting the chief documents adopted and the main speeches.

Professor Stefan Vassilev, Minister of Education and chairman of the Interministerial Council on Education and Vocational Guidance, presented the main report on the theme 'Some problems of educational and vocational guidance of youth in our country'.

Academician Sava Ganovski spoke **about** the all-round development of the individual and vocational guidance. The following papers were read on the rôle of public organizations in vocational guidance: 'Educational and vocational guidance - the concern of the whole nation' (Todorka Murdževa, Secretary of the Central Committee of the Komsomol); 'In the teaching profession - the young people who are best guided' (Maria Davidova, Secretary of the Central Committee of the Union of Bulgarian Teachers); ' The Fatherland Front and the trade unions - active collaborators' (Maria Dimova); 'The Komsomol and vocational guidance' (Dimitre Ketenev).

Professor of Medicine Boris Ianev discussed a number of problems to do with health, while Professor Genčo D. Piriov discussed the psychological problems of educational and vocational guidance.

Georgi Cenkov of Mihailovgrad communicated to the conference the results of surveys on vocational guidance. Irine Irinčev of the Institute of Foreign Students, Sofia, talked about the results of sociological research. Ivan Videv, inspector of Vocational Education at Stara Zagora, spoke on the theme 'Educational and vocational guidance on a scientific basis'.

Out-of-school work with pupils as a major means of educational and vocational guidance was discussed by Ivanka Antonova, headmistress of the T. Uliev primary school at Kazanlik. Master of Education Kančo Russev, of the Institute of Education at the Ministry of Education, presented a scientific paper on the theme 'Various forms of Daltonism and the vocational guidance of pupils'.

Doctor Prodan Stoianov, head of the Educational and Vocational Guidance Service of the School Clinic at Varna, and Georgi Velcev, of the Educational and Vocational Guidance Centre in Sofia talked about their experience.

The issue also includes directives for work on the educational and vocational guidance of youth for 1971-1973 (see CEAS No. 87).

Abstract prepared by Raina Todorva, head of the Centre for Educational Documentation and Information at the Institute of Education in Sofia.

Classification (for the use of receiver)	Country Bulgaria	CEAS No. 85
	No. 8	Date of issue December 1971

Author Ministerski Sěvet

Title *Razporeždane nr. 614 ot 30 dekembri 1970 za odobriavane model za visče obrazovane po matematika i mehanika ot nov tip*

Bibliographical data *Bjuletin*, Ministerstvo na narodnata prosveta (Sofija), br. 2 1971, p. 3-6

Translation Council of Ministers. *Decree No. 614 of 30 December 1970 approving new guidelines for higher education in mathematics and mechanics*

Keywords
Bulgaria
educational legislation
higher education
mathematics

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At the end of December 1970 the Government approved by a special decree new guidelines for higher education in mathematics and mechanics. This reform project was prepared by a working party under the direction of the vice-chairman of the Bulgarian Academy of Sciences, Professor L. Iliev.

The guidelines first deal with the problems of the training of specialists in mathematics and mechanics in the mathematics faculty of the University of Sofia. On the basis of the syllabus that has existed for the past ten years for the training of professional mathematicians capable of working in any field of mathematics, the new programme now provides for the division of the division of the course into three stages - basic studies, a specialized course, and a doctoral thesis. The basic studies lasts for six semesters for all faculty students, and their aim is to provide a grounding in modern mathematics and, starting from the first semester, to teach modelling, numerical analysis and work with computers and software. At this stage the teaching (except for formal lectures) is given to groups of 10-12 students in charge of an assistant. The student's performance is evaluated and computor processed on a weekly basis, and the information is submitted to the faculty board. On completion of these studies graduates have access to many posts in industry, including working with computors; they may, however, go on to specialize.

The specialization course lasts four four semesters, during which the following subjects are studied: logic and topology, algebra, real and functional analysis, complex analysis, differential equations, geometry, mathematical models, software, automation theory, operational research, probability and statistics, analytical mechanics, fluid mechanics, solid-state mechanics. Here the teaching is more individualized, each student working under the immediate direction of a member of the academic staff. On the successful completion of this second course of studies a degree in mathematics or mechanics equivalent to the master's degree is awarded. The purpose of this second stage is to turn out highly qualified specialists in research and theoretical work. The third stage is the course leading up to the doctoral thesis.

The new system also provides for a diploma that entitles students to teach mathematics in secondary schools after studying two additional semesters following the basic studies.

The system provides for the functional merger of the Institute of Mathematics of the Bulgarian Academy of Sciences and the Faculty of Mathematics of the University of Sofia. These two institutions have for a long time collaborated in their respective fields. Under the reform they now form the Joint Scientific Centre for Mathematics and Mechanics. While retaining a certain degree of independence, the institute and the faculty now have a common structure and fully-co-ordinate their activities at the levels of research, teaching and application of mathematics and mechanics. The new unified centre is regarded as an integral part of the structure of science and its applications in Bulgaria and more especially of the Bulgarian Academy of Sciences. In place of the former 'departments' (of the Faculty) and 'sections' (of the Institute), 15 joint sectors have now been set up, corresponding to the subjects given in the specialization course, in addition to which there is a sector for the teaching of mathematics and a qualification sector. The teaching staff in each sector, consisting of specialists from the institute and the faculty, consider the three basic functions of research, teaching and applied work as being of equal importance.

The system so far has applied to first and second semester students (approximately 300); it will be extended gradually to all students. The heads of sectors (term of office 5 years) and the Board of the Joint Centre will be elected soon.

Abstract prepared by Mr. B. Penkov, Joint Scientific Centre for Mathematics and Mechanics, Sofia.

Classification (for the use of receiver)	Country Bulgaria No. 9	CEAS No. 86 Date of issue December 1971

Author Ministerstvo na narodnata prosveta

Title *Naredba za zadacite i rabotata na organite za učilištno i professionalno orientirane i nastanjavane mladezta na rabota*

Bibliographical data *Bjuletin*, Ministerstvo na narodnata prosveta (Sofija) br. 2, 1971. p. 11-19

Translation Instructions concerning the duties and work of the organs for educational and vocational guidance and youth employment.

Keywords

Bulgaria
state responsibility for education
regulation
educational guidance
vocational guidance

This document, issued in accordance with Article 8, Section III, of the Ministerial Decree No. 52, defines the structures and functions of the five bodies responsible for educational and vocational guidance and youth employment.

The first chapter deals with the Interministerial Council for Educational and Vocational Guidance, the chairman of which is the Minister of Education and the Vice-Chairman the Deputy Minister of Labour and Social Security. The Council directs, organizes and co-ordinates the work of the ministries, departments and voluntary organizations operating in the field of educational and vocational guidance. It defines the basic orientation and the content of work in the educational and vocational guidance system and lines of research.

The decisions of the Interministerial Council in its own sphere of responsibility are binding on all ministries and voluntary organizations, It is accountable to the Central Committee of the Communist Party of Bulgaria, the Council of Ministers and the Committee for Economic Co-ordination. It works according to annual and long-range plans and meets at least three times a year. The operational and methodological work of the Council is carried out respectively by the Educational and Vocational Guidance Section and the Methodological Centre for Educational and Vocational Guidance.

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The second chapter describes the composition, rights and duties of the regional Educational and Vocational Guidance Commissions. These commissions direct, organize and co-ordinate the activities of the Interministerial Council within each administrative region. Decisions adopted by them within their own sphere of responsibility are binding on all enterprises, organizations and district and school commissions within each region. The commissions are accountable to the Executive Committees of the regional People's Councils and to the Interministerial Council. The operational work of a regional commission is carried out by an educational and vocational guidance inspector. Definitions are also given of the duties of the regional education and public health sections of regional factory inspectors, labour exchanges, planning commissions and information services.

The third chapter defines the composition, rights and duties of the district Educational and Vocational Guidance Commissions. They direct, organize and co-ordinate the activities of the Interministerial Council within each district. The decisions of these commissions are binding on all enterprises and organizations within the district. The commissions are accountable to the Executive Committee of the district People's Council. The operational work is performed by the labour exchanges. The latter also keep occupational guidance and employment files on young people between 16 and 22 years of age.

The fourth chapter describes the composition, rights and duties of the school commissions. These commissions direct and organize the educational work of pupils with a view to proper vocational selection and guidance in educational establishments.

The fifth chapter describes the objectives and duties of the methodological centres and vocational counselling centres. These centres are services specialized in educational and vocational guidance set up by a decision of the Interministerial Council in agreement with the Ministry of Finance.

The document lastly mentions the various specialized services, where they are situated and their relationship to other bodies. These services give methodological assistance to the commissions, schools and other public bodies responsible for educational and vocational guidance. They organize the vocational counselling for parents and pupils, provide vocational information on the needs of society and the various professions in the national economy and assist teachers and youth organizations in educational work for the young.

Abstract prepared by Violeta Musakova, Head of the Educational and Vocational Guidance Section, Ministry of Education, Sofia.

Classification (for the use of receiver)	Country Bulgaria	CEAS No. 87
	No. 10	Date of issue December 1971

Author	Ministerstvo na narodnata prosveta
Title	*Nasoki za rabotata po učilištnoto i professionalno orientirane na mladežta prez perioda 1971/1973 godina*
Bibliographical data	*Narodna prosveta* (Sofija), br. 3, 1971, p. 84-91
Translation	Directions concerning the educational and vocational guidance of the young for the period 1971-1973
Keywords	

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On 5 January 1971 a national conference on educational and vocational guidance was held in Sofia. The conference considered achievements in the field and adopted directives for vocational guidance for the period from 1971 to 1973. These directives, which are set out under three chapter headings, explained the need for organized and competent work in this field in order to cope with the rapid development of the economy. The place of vocational guidance in the educational process is defined, as well as the tasks which it involves.

The first chapter, on vocational guidance of the young at school, gives directives for the work of the principal and of the school's commission for vocational guidance. The obligations of those responsible for vocational guidance in the classroom are defined. A special place is devoted to the work of vocational guidance in the educational process. Out-of-school forms of vocational guidance are defined as is the rôle of voluntary organizations in the educational sphere. Emphasis is given to the importance of the school library as an aid to pupils and teachers in the choice of an occupation. The rôle of the school doctor in the vocational guidance of pupils is also mentioned.

The second chapter defines the factors that make it possible to ascertain at regular intervals the number and social composition of young people who leave school before completing their studies with a view to providing them with educational guidance. It lists the responsibilities of the regional labour inspectorates as regards the organization of educational establishments and courses designed to turn out lower-level workers needed for the national economy, and the means for establishing these institutions and courses. The part played by the Komsomol, the unions and the Fatherland Front in the out-of-school vocational guidance of the young is analysed.

The last chapter contains the basic directives concerning the work of the regional methodological centres and indicates their place in the educational and vocational guidance system. It specifies the methodological research and defines the activities and qualifications of those engaged in guidance work. Space is devoted to the work of the centres in analysing pupils' personalities, to concrete research and to vocational guidance counselling facilities for the young.

Lastly there is a study on collaboration between the methodological centres and voluntary organizations, enterprises, research centres, scientific and technical societies, etc., as regards publicizing educational and vocational guidance.

Abstract prepared by Mr. Susi N. Bukureshtleva, Inspector in the Educational and Vocational Guidance Section, Ministry of Education, Sofia.

Classification (for the use of receiver)	Country Ceylon No. 1	CEAS No. 88 Date of issue December 1971

Author	Committee appointed to Report on the Re-organization of Higher Education
Title	*Report of the Committee...*
Bibliographical data	Colombo, Ministry of Education, 1971. 114 p.
Translation	
Keywords	Ceylon higher education educational organization educational administration university admission

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The Committee was appointed by the Ministry of Education to recommend ways and means for restructuring of the existing university organization with a view to achieveing a greater degree of efficiency in the light of the limited resources available and rationalizing the courses of study offered at university level taking into account both the cultural and manpower needs of the country. Its terms of reference covered the following subjects:structure of the universities; relations with the Ministry of Education; finance; admissions; curricula and their future development; changes considered necessary in the draft University Grants Commission Bill. A summary of the committee's recommendations is given below.

Until such time as sufficient vocationally oriented institutions of tertiary education are set up, there should not be, as far as possible, any reduction in the over-all intake into the Universities. In the meantime, job-oriented courses leading to 'diplomas' and 'certificates' below the degree level should be initiated in suitable departments of the universities.

The presently available combination of 'soft' options in the arts should be limited and subject combinations of a more meaningful nature should be encouraged. There should be greater flexibility of interdisciplinary combinations for both arts and science students with a view to broadening their horizons. Departments and courses of study should be rationalized and re-distributed to achieve maximum efficiency in teaching and to reduce unnecessary duplication.

The present University of Ceylon, the University of Ceylon, Colombo, the Vidyodaya University, the Vidyalankara University and the College of Technology, Katubedda, be re-constituted to form a single *University of Ceylon*. The basic unit of this University should be the college, consisting of several departments and schools of study and the colleges should enjoy a degree of autonomy in respect of academic affairs, administration and financial expenditure. Each department should have a departmental committee with an elected head from the teaching staff and departmental faculties of the college should be the academic authority. The Dean should be elected by the college councils (which includes representatives from students, teachers, and university employees) and will be generally in charge of each campus. Students should be appropriately represented in the committees and governing bodies of the college and non-academic staff should be represented on the college council.

In the event of there being more than one college on any campus, an inter-collegiate board should be set up to superivse functions and services common to the campus, such as residence, sports, welfare and discipline, health and sanitation, maintenance and landscape.

The administrative authority of the university should be the board of governors, consisting of: the deans of the colleges; seven persons nominated by the Chancellor, three of whom should be Members of Parliament; three ex-officio members, namely the Director-General of Education or his representative and one representative each from the Ministries of Planning and Finance; and the President and Secretary of the University Student's Union. The Vice-Chancellor should be elected by the board of governors from among the deans of the colleges, by the system of the single transferable vote.

Educational institutions outside the university which have reached required academic standards may be reorganized as affiliated colleges of the university and have the right to award diplomas and certificates of the university.

The academic freedom of the university with special reference to appointments, promotions, teaching and courses of study should be preserved. However, in the following four areas the

Government should have the right to request the university to abide by its policy decisions: (i) determination of the number of students that should be admitted to the university as well as the emphasis to be given to particular fields of study in relation to the manpower needs of the country; (ii) the medium of instruction; (iii) matters pertaining to finance; (iv) provision for the administration of the university in times of national emergency or in circumstances where there has been a break-down of the university administration in one or more of its campuses.

There should be a system of quotas for the admission of students to various fields of study in order to encourage more meaningful courses of study and discourage others. In view of the wide disparity existing in educational facilities between schools and districts, a system of standardization of marks should be adopted in university admissions - as a temporary measure until such time as educational facilities are more equitably distributed. Such a standardization should be on the basis of: (i) a graded classification of schools and (ii) the facilities available in each district.

The university should set up both a Career Guidance Committee, to advise students entering the university regarding suitable fields of study and subject combinations, and a Placement Unit, to assist graduates in seeking and obtaining employment.

Abstract prepared by Mr. M. Ralapanawe, Secretary, Ceylon National Commission for Unesco, Colombo.

Classification (for the use of receiver)	**Country** Cuba	**CEAS No.** 89
	No. 1	**Date of issue** December 1971

Author Ministerio de educación

Title *Primer Congreso nacional de educación y cultura (La Habana, 23-30 de abril de 1971)*

Bibliographical data In : *Informe de Cuba* [para] *XXXIII Conferencia internacional de educación OIE-Unesco, 15-23 septiembre 1971*
La Habana, 1971. p. 11-33

Translation First National Congress on Education and Culture (La Havana, 23-30 April 1971)

Keywords

Cuba	teacher training
educational policies	teaching methods
educational reform	mass media
quality of education	school administration
educational objectives	parent participation

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On 14 December 1970, the Ministry of Education decided to establish a committee to organize the First National Congress on Education and Culture. It consisted of officials from the Ministry and representatives of various scientific and cultural institutions and political and mass organizations. The objectives of the Congress were: (a) to gather definite information on the whole problem of education at all levels and including all types of schools; (b) to gain a thorough knowledge of the factors affecting the work of people engaged in education; (c) to provide an opportunity for the masses to make a creative contribution to the study of problems which require continued, systematic and thorough analysis if they are to be solved; (d) to propose measures whereby the ideological training of young artists may be strengthened; (e) to study the forms of infiltration by cultural neo-colonialism and work out a plan of action to prevent its harmful effects within the nation; (f) to encourage lawful and competitive cultural manifestations in Latin America, Asia and Africa, and to assimilate in a critical way the best of universal culture; (g) to make recommendations which may serve as a basis for drawing up educational and cultural policies in the coming years.

In each of the provinces four types of preliminary meetings for the Congress were held: basic meetings, in centres or groups of centres; municipal congresses;

regional congresses; and provincial congresses. Each topic was discussed by more than 116,000 educational workers at a total of 2,599 meetings. The Congress brought together 1,781 delegates who approved 413 reports and made 3,106 recommendations for the improvement of education at all levels and in all branches.

The education of the student. It was considered necessary to: increase participation by mass organizations in the effort to improve school attendance and punctuality on the part of children, young people and adults, in order to eliminate absenteeism, dropping out and retardation; request the application of more exacting measures with regard to the compulsory nature of education, since our society does not tolerate the presence of young people who are neither studying nor working; bring about the assimilation of social values through the understanding that comes as a result of reciprocal relations, solidarity and mutual respect between the teacher and the taught; organize teaching activities in such a way that they foster lifelong study and eliminate the 'finality' and 'facility' attitude at all levels of education; educate our students in an awareness of the need to care for the material wealth of society produced by the labour and efforts of our workers; set up a vocational guidance committee to arouse the interest of young people in occupations which are vital to the economic development of the country; include at all levels of education planned and periodic participation by the student in productive activities so that future generations will be conscious of being producers instead of merely consumers; co-ordinate and organize physical education and sports programmes from the earliest years of primary school up to and including higher education, thus forming a single programme which includes the activities in vocational curricula; plan in a gradual and systematic way the military training of youth so that they may be taught from a very early age the principles and standards of conduct which will fit the new man for the defence of his country; and, to develop in students a feeling of solidarity and an understanding of their rôle in the new society.

The educational worker and his rôle in education. The main task of the Cuban teacher today is to train the new generations. His essential qualities are: loyalty to the revolution, love of work, a constant readiness to improve, initiative and a creative spirit, a sense of responsibility, links with society and sensitiveness to the problems and difficulties of his pupils. The training of teachers should be carried out on a single basis or plan including aims, objectives, curricula, programmes, ideological and pedagogical orientation and educational research. Young people should be continually and increasingly encouraged to enter the teaching profession, and the most capable and experienced teachers should be promoted to teach in teacher training institutions. In order to make the assistance, guidance and systematic supervision of teachers more efficient, inspectors, principals and university professors must be appropriately trained. Because of their importance to our development, the constant renewal and up-dating of teachers' qualifications require the utilization of the best human resources available, careful revision of the present system of promotion and the expansion of educational information services. Periodical evaluation of the work of teachers and educational leaders is an important factor making for the attainment of the goals of education. It is advisable that every recently graduated teacher should spend two years in rural areas and that afterwards he should teach near his home, as this will make for greater stability in the performance of his duties. It is further advisable that teachers should not be promoted to administrative posts, and that the non-teaching staff connected with education should be suitably selected because of their importance in the training of students.

Objectives and content of education. The general objectives of Cuban education are based on the philosophy of Marx and Lenin and are consequently meant to promote the intellectual, technical, physical, moral and aesthetic training of the individual for the society which is being built. The critical analysis made of study courses and curricula led the Congress to recommend improvement in their vertical and horizontal co-ordination, more effective co-operation between the specialized branches of education, a more rational arrangement of subject matter, a more systematic and wide-spread participation of teaching staff in the drawing up of study programmes, and the establishment of a permanent committee to plan our education scientifically in accordance with the projected development of the country. In order to guarantee proper planning for a skilled labour force, it is advisable to set up a high-level joint commission to decide on all matters relating to the training of technicians in the country. It is becoming necessary to increase the number of refresher courses for graduates of institutions of higher learning and to make such courses available to them wherever they may be working. The generalization of higher education will constitute the effective contribution by teachers and students in our centres of higher learning to the economic, scientific and technical development of the country; it will also provide an efficient way of teaching to learn, and of combining theory with practice.

Methods, materials and evaluation of teaching. Since teaching methods must keep pace with scientific progress, activities should be planned which make it possible for educators to master scientific methods. It is advisable to continue to teach the new mathematics in schools throughout the country in order to give students a more complete over-all training. With regard to the use of the imitative and simplified national methods for the teaching of reading, the Ministry of Education is requested to ascertain, through research, how effective each of them is, with a view to their subsequent recommendation to all teachers. It was recognized that there was a need for the constant reform of teaching methods, following research and the study of experiments carried out in other countries. There is also a need to increase national experiments in programmed instruction and to encourage the use of the most advanced techniques in foreign-language teaching.

It was recommended that a cumulative record should be kept of the pupil's activities from the pre-school period till the end of his studies, and that this should be correlated with his work record. Following a critical analysis of educational television in Cuba, it was requested that such an evaluation should be made periodically and systematically, and it was pointed out that it would be desirable to seek suggestions from all those who were in any way involved in educational television, with a view to improved use of this medium.

School organization and administration. The importance of supervisory boards was recognized and it was considered necessary to extend them to primary school centres. It was suggested that administrative inspection should be re-established at all levels of education; it was recommended that greater attention should be paid to the technical and organizational problems of the one-teacher school, and that rural schools of this kind should continue to function until conditions in the country made it possible to establish graded rural schools. Considering that in the early stages of a child's life daily contact with the home is extremely important, the boarding-school system as applied to primary education should be limited to cases where pupils have social or economic problems or where communities have been dispersed; in general the day-school was to be preferred. It was recognized that school libraries were highly developed, and that there was a need to include their activity in educational planning and to set up a middle-level technical centre to train librarians. With regard to academic calendars, it was recommended that they be unified as far as possible, in order to avoid the complications brought about by differences at the various levels of education. It was suggested that pre-service and in-service training courses should be given for directors of educational centres in view of the importance of their work. Emphasis was placed on the establishment of a plan for maintenance and full use of school buildings, equipment and teaching materials, so as to avoid shortages. It was recommended that a preliminary draft of a set of regulations be drawn up covering all levels and branches of education and defining the rights and duties of students and educational workers, and the social responsibility of parents; and that, once this draft had been discussed at all study centres, trade union sections and mass organizations, it should be given final approval and then promulgated.

Influence of the social environment on education. School boards must be strengthened in order to bring a more direct educational influence to bear on parents and to set up schools for them, with a view to improving the all-round education of the children. It was recommended that juvenile delinquency should be directly combated in all its forms, that dropping out and retardation should be eradicated, since they were the main causes of this phenomenon; that special education should be given to mentally backward minors who committed delinquent acts or repeatedly displayed anti-social behaviour; and that those who were maladjusted but not retarded in their studies should be enrolled in workshop schools. An analysis was made of the influence of the school environment, the teacher, the family and the community on the over-all training of the pupil, and it was pointed out that there was a constant need to raise the educational and cultural standard of the people so that all these factors might actively contribute to the general work of education. A policy should be devised to bring about an ever closer relationship between production and education, and to ensure that the practice work done by pupils in production centres is related to education and training. It is imperative to combat all forms of ideological deviation as manifested in fashions, customs and extravagances. It was pointed out that the planning of out-of-school activities, concern for pupils in their free time, recreation and consequent political activities are essential tasks in the ideological training of students. It was recommended that sex education should be provided for teachers, parents and students, not as a classroom subject but as part of general education and through the use of mass communication media. Closer links should be established between the Ministry of Education and the bodies in charge of mass communication media, with the object of producing programmes which will really make an effective contribution to the training of children and young people. It was essential to work towards a substantial development of the nation's cultural forms and values, an understanding of the various ways in which Latin American culture is expressed, and the assimilation of the best of universal culture, without imposition from outside. A greater degree of co-operation between cultural organizations is advisable in respect of the use of radio and television as a means of disseminating the highest forms of cultural expression. It is necessary to eliminate all kinds of distorting influences in radio and television programmes. It was recommended that full-length and documentary films of a historical nature continue to be made in increasing numbers in Cuba, and that audiences be educated to analyse actively the various productions of a medium so important as the cinema. An effort must be made to develop literature for children to a greater extent, to discover new forms of expression in narrative and illustrative language, and to make optimum use of the resources set aside for children and young people in this regard.

Community education groups. The Cuban people are both the subject and the object of education. All efforts in one and the same direction are co-ordinated through what are known as community education groups. It was recommended that school boards be strengthened, that new vigour be imparted to municipal, regional and provincial bodies concerned with education, and that mass organizations establish contact with the families of students through the appropriate machinery, so as to allow mutual co-operation and assistance in the work of education. Support should be given to the Model Parents Movement, founded by the Committees for the Defence of the Revolution to bring parents into closer contact with the school, and to the Combatant Mothers Movement for Education, which is sponsored by the Federation of Cuban Women mainly to assist the teacher in his social activity work.

Abstract prepared by the Ministry of Education, Havana.

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Author Castro Ruz, Fidel

Title *Discurso pronunciado en el acto de inauguración de la escuela secundaria básica "Ceiba Uno", el día 7 de enero de 1971.*

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Translation Speech made at the opening of the basic secondary school "Ceiba Uno", on 7 January 1971.

Keywords

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secondary education
rural education
school organization
school buildings

The concentrated nature of agriculture and cattle-raising in Cuba requires that the rural population should be regrouped in communities, with the aims of improving workers' living standards, and establishing a new type of school which will do away with the traditional distinction between urban and rural schools and, in view of the underdevelopment, make rural areas the pivot of national progress. The *Escuela en el Campo* *(School in the Country) Plan, is in accordance with these circumstances and needs. Teachers and students are involved in a total education, scientifically and culturally indispensable for the promotion of a new type of man who creates material wealth for social purposes. The Government intends gradually to model all basic secondary schools on these same lines. Between 1980 and 1985 the Plan foresees the construction of 1,200 such schools with room for 700,000 young people. The first two, set up experimentally, afforded educators valuable experience in the organization of schoolwork and the participation of students in productive tasks; by June 1971 six schools had been opened. The schools consist of a group of four large prefabricated buildings with clascrooms, laboratories, workshops, libraries, space for sports, recreational and cultural activities, dormitories and dining halls. They accommodate 500 students - 250 women and 250 men - divided into twelve groups of approximately 40 students in the 7th, 8th and 9th grades of general basic education. In*

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view of the various misgivings that had been expressed in connexion with the opening of the first school under the Plan, Comandante Fidel Castro, explained the basic features of this new type of institution at the opening of the second school. The major points in his discourse are given below.

The *Escuela en el Campo* is in no way inferior to any city school, but is adapted to educational ideas that are in agreement with the basic principles of Marxist thought which conceives of education and the training of the individual as being related to productive and creative work; it is in agreement with the traditional ideas of the country and with the ideas of Marti; it corresponds to the real possibilities of training the individual, i.e., it combines education, study and work. It is not exactly a specialized school - young people do not specialize in agriculture - they begin to engage in productive activities, to create material goods with their own hands, to perform productive manual work, in addition to intellectual work. In other words, they begin to learn how the material goods which man needs are produced; they begin to acquire habits of work as being the most natural and fundamental duty of every citizen; and at the same time they acquire habits of study. Moreover, a general basic education is acquired along with practice in laboratories, activities in science clubs and a certain amount of research. Students obtain a general education and a general culture at an all-round school before going on to higher courses, i.e. to the technological institutes where they begin to specialize in order to gain a broader foundation for specific higher studies in the university.

A recent census showed that of a population of 8.5 million, approximately 3.5 million are under 16 years of age - all needing clothes, shoes, food, lodging, education. Books must be produced for them; vast human resources must be devoted to their education, to their material, cultural and recreational needs, to their health. And this must be accomplished while depending on an economy in which the basic production comes from manual labour. In view of this situation, and the material limitations, limits cannot be placed on education as well. The problem remains, however, how to educate all the children and young people in the country. This type of institution cannot be allowed to increase if, at the same time, its programme is not related to productive activities.

Previous societies condemned man either to manual labour alone or to intellectual work alone. If, however, the goal today is the universalization of knowledge up to its highest levels, then it is necessary to inculcate in all citizens, from their early youth, the habits of working, taking part in manual activities, and producing. To reach such a goal, in a poor country such as Cuba, it is necessary that young people from the age of about twelve, i.e. as soon as they enter this new type of school will take part in productive activities. The next level, i.e. the technological institutes, will be geared to industrial production: students will receive some general theoretical training and will also take part in productive activities related to the specialized branch for which they are studying. Thus by linking education to production as a developmental,human, social, and economic need, unlimited growth can be foreseen. School building for example is no longer an economic investment for the future it is almost immediately a productive programme.

The school's agricultural activities not only involves work with sugar and rice, but also with coffee, citrus and other fruits. There is no limiting factor of an economic nature. The contradictions between the present poverty and the great need for social, technological and economic development, and the desire to make education universal is resolved. While being optimistic about this revolutionary education programme, one must be aware of its difficulties. For example, there is a great scarcity of teachers in the country, especially at these levels. In other words, there are limiting factors of a subjective nature which must be overcome if these plans are to be fully implemented. Moreover, this type of school requires a great deal of co-ordination, a large measure of understanding between productive and educational interests. The criterion of practicality must never be allowed to prevail. Those responsible for productive activities must be aware of the problems of education and give first priority to educational considerations. Those responsible for educational activities, on the other hand, must be seriously concerned with production.

It is interesting to note that the first secondary school of this type had the lowest repeater rate in the whole country, in spite of the fact that the pupils were not selected, but were simply from the local areas. This was in large measure due to the benefits of the system: modern media such as television; wide cultural activities; and material facilities such as well equipped sports grounds.

It is necessary that parents should co-operate fully with the school as responsible partners in the school enterprise, and a strong brotherly spirit should prevail among all students. A collectivist mentality should be developed, selfishness and individualism should be systematically combated, and a sense of what is most essential in human life should be inculcated appropriate to a young revolutionary and communist.

Abstract prepared by the Ministry of Education, Havana.

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Author	Planlaegningsrådet for de højere uddannelser
Title	*De videregående uddannelsers udbygning 1971/72 - 1975/76*
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Denmark
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In 1967 the Planning Board for Higher Education, which is attached to and works under the over-all supervision of the Ministry of Education, published a report entitled 'Sketch Plan for the development of higher education in the period up to 1980'. The Plan gave high priority to the development of the training capacities of the Danish universities. The report has led to the enactment of two important laws: (a) Act No. 209 of 31 May 1968 concerning the general development of the Danish universities, in which the financial framework was laid down until 1 April 1976; and (b) Act No. 263 of 4 June 1970, concerning the future location of the University of Copenhagen and other university centres.

Early in 1971 the Planning Board for Higher Education issued a second report, up-dating its proposals for expansion made in the original Sketch Plan. This report goes still further than the first one by covering also a number of other fields of post-secondary education with the same admission requirements as the institutions of higher education.

The main conclusion of the report is, that due to the unforeseen increase in the number of pupils qualifying for entrance to higher education, it will be necessary to expand post-secondary education facilities in the period 1971-76 at a much more rapid rate than was originally planned and that it will be economically

advantageous to develop particularly the shorter types of post-secondary education. At present they have more rigorous entrance regulations than the universities, which has led to the application of a strict *numerus clausus*. It is now estimated that the number of students qualifying for entrance to higher education will increase from 12,000 in 1970 to 17,000 in 1975.

In planning the expansion and further development of post-secondary education, the principal basis for consideration may either be the social demand for access from a growing number of applicants, or the labour market demand for university graduates. The report points out that the prognostic techniques are not yet sufficiently advanced to base the development planning on the evaluation of the demand for graduates, and that the existing entrance restrictions are not based on manpower requirements. As a result the social demand for access and the evaluation of costs, as compared with available resources, will be the principal factors influencing priorities for the development of educational capacities. As the combined demand for educational development is dependent not only on the total number of pupils seeking admission, but also on the distribution of students engaged in longer or shorter types of post-secondary studies, the demand for development may be diminished by abolishing admission restrictions, sometimes very stringent, to a number of shorter-term studies.

It is pointed out that further restrictions in any particular field of education cannot compensate for the development of post-secondary education as a whole, in relation to the expected total demand for admission, due to the fact that such restrictions will merely create increased pressure on other types of education.

An analysis of the cost of different types of post-secondary education shows the financial consequences of the students' choice of shorter or longer studies. The following categories of expenditure are dealt with: annual running costs per student; total cost per graduate by fields of study; costs per 100 students admitted, i.e. the annual cost of a yearly influx of an additional 100 students.

The variations in running costs between different types of studies are considerable. The more expensive studies are those which include experimental research as an integrated part thereof. Programmes of study at the universities amount to between 20,000 and 30,000 Danish Kroner ($2,600-$3,900) per student, 200,000 Danish Kroner ($26,000) per graduate, and

15 million Danish Kroner ($2 million) per 100 students accepted. A number of fields of study outside the universities, most of which do not comprise any research, total between 10,000 and 20,000 Danish Kroner ($1,300-$2,600) per student annually, somewhat less than 100,000 Danish Kroner ($13,000) per graduate and under 10 million Danish Kroner ($1.3 million) per 100 students admitted.

Comparatively lowest in running cost - under 10,000 Danish Kroner ($1,300) per student annually - are the faculties of the humanities and social sciences, and certain other fields that do not comprise research, but include some practical training outside the institutions. Due to long periods of study, and a comparatively high percentage of drop-outs, the cost of study in these subjects totals about 100,000 Danish Kroner ($13,000) per graduate, while the cost per 100 students accepted does not exceed 5 million Danish Kroner ($660,000).

As far as differences and development of expenditures per student at the universities are concerned the report shows that during the period 1965/66-1968/69 improvements and developments - increase in cost per student - amounting to 7-9% annually have been achieved, as compared to only about 5% annually during the period from 1968/69 to 1970/71. In the 3-year budgetary period 1972/73-1974/75 standard improvements and developments are fixed so as not to exceed 1% annually, despite the fact that new universities, at which the running costs per student will be higher than those at existing universities, are to be established.

Corresponding estimates have been made in respect of financial aid to students. These costs amount to between 1,300 and 5,600 Danish Kroner ($170-$750) per student in most fields, while the cost of student aid per graduate differs from 4,000 to 47,000 Danish Kroner ($530-$6,260). An amount of between some 400,000 and 1.8 million Danish Kroner ($54,000-$240,000) will therefore be needed for every 100 pupils admitted. As far as the more expensive types of study are concerned, student aid totals less than 10% of all operational expenditures taken together, while for the less expensive studies this amounts to 45% of all operational expenditures. The introduction of student aid covering all living expenses (student 'wages'), as proposed by the Study Grant Committee, might cause the total cost to go down on account of a greater activation of studies and the elimination of paid employment accepted by the students during their period of study.

The present cost of capital investment per 100 new students admitted is estimated at 5-10 million Danish Kroner ($660,000-$1,320,000) in humanistic and social science studies, and more than 100 million Danish Kroner ($13,200,000) for the fields comprising experimental research.

Estimates concerning the development of specific types of non-university studies are discussed in relation to the plans for university centres. In nearly all non-university institutions of higher education it has proved necessary to establish a *numerus clausus*. In the period under discussion it has been possible, however, to enrol an average of from 60 to 90% of the applicants. Due to certain but limited developments through the years the number of rejected students has thus been gradually decreasing, and as an example it may be mentioned that less than 40% of the students applying for admission to dental colleges are now rejected. Non-university institutions have found it necessary to reject relatively larger numbers of students applying for admission, as the number of applicants has, in some instances, increased by 300%. Schools for social service personnel admitted in 1970 only about 25% of those applying for admission, schools for physiotherapy 32%, schools for librarians 62%, and teacher training colleges about 75%.

Through comprehensive estimates of alternative developments, it has been ascertained that if the non-university fields of education are not developed beyond the level previously planned, then the influx to the universities will increase from 6,600 in 1970 to approximately 12,000 in 1975.

The recommendations made for the development of university centres, with a considerable capacity in a variety of fields, should, on the other hand, cause the influx to *these other fields of education* to increase from 8,000 to about 12,000 in 1975, thus considerably relieving the pressure on the universities, causing the influx to them to be estimated at 8,600 in the same year, an increase of only some 2,000 annually compared to 1970.

Through the development of non-university fields of study the student body at the universities should, by 1975, be reduced to some 50,000, as against the orginally estimated 60,000, an increase of about 3,000 a year, and as a consequence a reduction of costs amounting to some 120 million Danish Kroner ($16 million) annually may, on a long term basis, be envisaged by abolishing entrance restrictions for most of the non-university fields of education.

If this reduction of operational expenditures is to be attained, however, it will be necessary to invest between 450 and 500 million Danish Kroner ($60-66 million) in addition to the amounts already earmarked for such investments, during the period 1971/72 to 1975/76, and to provide well over 100 million Danish Kroner extra for operational costs in 1975.

On the basis of these analyses the Planning Board recommends the following measures:

The non-university fields of post-secondary education should be further developed with the aim of establishing unlimited access for qualified applicants at the various institutions operating at this level.

The budgetary estimates for the period up to 1976 should allow for investment expenditure of between 450 and 500 million Danish Kroner and for operational expenditure of 100 million for developing the non-university fields of education, and thereby relieving the pressure on the universities.

The engineering colleges should be expanded to ensure free access to them, and free access to the schools of architecture should be achieved by establishing a new architectural line at the Aalborg University Centre.

The intake capacity of the existing schools of architecture, colleges of business administration and economics, schools for social welfare workers, for physiotherapists and for librarians should be expanded and a continuous development of existing teacher training colleges should be ensured.

These measures, the report concludes, should make it possible to abolish the *numerus clausus* at all these institutions within a reasonable period of time.

Abstract prepared by the Danish Ministry of Education and submitted through the Documentation Centre for Education in Europe.

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Author Folkeskolens Laeseplansudvalg

Title *Notat om et grundlag for gennemførelse af en reform af de grundlaeggende skoleuddannelser*

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Translation The Curriculum Board of the Primary and Lower Secondary School. *Memorandum concerning the basis for the realization of a reform of basic school education.*

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The Danish Parliament, on the basis of the Resolution of 30 May 1969 on the reform of basic school education, requested the Government to work out plans for a continued development of the Folkeskole (primary and lower secondary school) on the principles defined in the resolution. On these terms of reference the Curriculum Board of the Folkeskole has compiled a Memorandum dealing with some of the problems of educational development in Denmark in the immediate future. The resolution is included as an Annex to the Memorandum.

The Memorandum is mainly concerned with the structure of the *Folkeskole* and its activities. This structure is considered a prerequisite for the more essential areas of reform that, in the Board's view, should comprise both a revision of curriculum content and a development of teaching methods. This over-all view attaches importance to maintaining an equilibrium between what is desirable pedagogically and what is possible in practice, to ensuring Nordic harmonization, and to maintaining the Danish legal tradition in education of common standards and free play for local initiative. An account is given of the development trends within the *Folkeskole* and an outline of its future structure.

The *Folkeskole* in principle should be a 9-year basic school organized as a comprehensive school of undivided year-classes followed by a 10th school year so

strongly linked to the basic school that the *Folkeskole* constitutes an organic entity also for those pupils terminating their education after the 10th school year. Special or remedial education should be further developed and fully integrated, either in the form of supplementary instruction or in special classes according to the needs of each pupil.

Pre-school education should be further developed; consequently it is recommended that one or more pre-school classes be established in all schools which enrol beginners, and these classes should be administered by the primary school system.

In the upper forms of the *Folkeskole* the curriculum must comprise a certain number of optional subjects that are, for the most part, organized according to local wishes and means and provide the possibility for any pupil to continue his education.

In these forms a certain part of the curriculum should be organized at different levels. The pupil should, after having participated in the guidance programme of the school, be free to decide on the level at which he wishes to study a certain subject.

The *Folkeskole* should organize supplementary educational activities, particularly musical activities and sports. These activities should be so organized that pupils attending any form can participate.

The curriculum should remain divided into subjects but there should be more co-ordination between the subjects. Psychology, sociology, datalogy and electro-techniques are, for example, fields of study that might be the basis of new subjects. There may be difficulties, however, in providing for the further training of teachers necessary to ensure that the new educational activities will be in the hands of well qualified persons capable of using advanced methods and means. Therefore before carrying out any reform it is essential that improved facilities for supplementary training of teachers are available.

The problem of establishing a friendly and healthy atmosphere in the school is emphasized; it is pointed out that conflicting opinions have led to a certain inconsistency between the need for efficiency and the need for a healthy atmosphere. Both needs are indispensable if the school is to meet its demands. They tend, however, to disrupt the structure of the curriculum:

on the one hand there is the problem of increasing the number of lessons in those subjects necessary for obtaining qualifications or access to institutes of higher education and, on the other, the demand for a corresponding strengthening of various creative activities. The Curriculum Board believes that there should be no such clash of interests - a healthy and friendly atmosphere between members of a group may further efficiency just as well as efficiency in instruction may create a harmonious atmosphere. In many cases the aim should be to find, in the daily routine of school, a balance that will give the pupils the best possibility of development.

The statement of educational aims now in force has been debated publicly for some time because these aims were based on the needs of a less dynamic society and are unrelated to the problems of today that arise out of the rapid transition of a community into an industrialized society. The Curriculum Board emphasizes that the following points should be taken into consideration when new aims are stated: social development reacts on school environment; during the 1960s there was a continuing democratizing and decentralizing of the decision-making processes in education; parental influence on and pupil participation in the daily life of the school and the organization of educational activities has increased; greater emphasis has been placed on the socio-pedagogical tasks of the school; the need to emphasize the interaction between individual and social needs.

The increased flow of pupils who continue their education beyond the compulsory education level has presented the school with new problems which will be no less acute in the future. One of the main tasks of the school therefore will be to contribute to the development of norms of behaviour and values; here the importance of motivation in studies and co-operation between home and school must be emphasized.

In view of the foregoing, the Curriculum Board recommends that a new statement of aims should provide that each pupil is given the opportunity to: acquire skill, knowledge and insight; develop his independence, personality and social awareness; experience and evaluate his own possibilities and limitations; develop his abilities to evaluate and make decisions independently; further his ability to work independently; stimulate his imaginative and creative powers; assume responsibility for influencing common decisions; further his understanding of of other people's problems.

The Curriculum Board does not make recommendations on the problem of the timetable and the number of weekly lessons for each subject; this is mainly due to the fact that the *Folkeskole* is a municipal school with a considerable degree of independence. It, however, recognizes that local education authorities may need guidance on model or alternative timetables.

Finally, the Board recommends that existing terminating examinations should be abolished, and that the examination system should be simplified and converted into the leaving examination of the *Folkeskole*, which primarily should be attempted by pupils terminating the 10th school year. It should be possible to pass this examination at two levels (corresponding to the instruction given); the examination should not be compulsory and pupils may compose their own examination programme, both for subjects and level. The number of examination subjects should be decreased and no criterium for passing should be established.

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Author

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Recommendation on a reform of technical and vocational education

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This report compiled by a committee appointed by the Minister of Education proposes a comprehensive reform of vocational training. It is expected to be laid before Parliament towards the end of 1971.

Evaluation of the present system of apprenticeship training. For some time the apprenticeship system has been subjected to criticism. On the basis of this, the report emphasizes that within the present 152 different trades and fields of training the co-ordination of education has been insignificant. Young people, even at the beginning of their apprenticeship, must make decisions with regard to their future occupation. Throughout their training period there are normally no possibilities for transition to other fields, unless the apprentice is willing to begin anew in a different trade.

Coordination between the theoretical and the practical parts of their training is often also absent, and there seems to be a lack of planning in the type of instruction given. In addition, technological development has meant that many enterprises are too specialized to give their apprentices a sufficiently wide training - they become specialists within a narrow field.

Apprenticeship training is often designed to cover a wide field of different activities, in which certain working operations might be carried out by persons with lower qualifications, while others might require a more comprehensive education and training. Furthermore too little weight is being placed on general education, i.e., subjects that would give access to further theoretical education. A distinction is thereby created between those who have received a general theoretical education at the secondary level and those who have not. There are few possibilities for young people to obtain further education after completing their apprenticeship training.

In conclusion it is emphasized that there is a lack of coordination and flexibility within the apprenticeship system in its relationship to other types of education for the age group 16-19 (20) years.

Proposed new structure of the educational system for the age group 16-19 (20) years. In this model the educational system is subdivided into three main levels: (a) basic general (primary and lower secondary) education for the age group 7-16 (17) years (the 9th educational year will be obligatory from 1973/74); (b) secondary education for the age group 16-19 (20) years; (c) post-secondary education for the age group 19-25 years.

At the level of secondary education a distinction is made between general secondary education (upper secondary school leaving examination and higher preparatory examination) and secondary vocational education which today is covered by apprenticeship training and certain other types of vocational training. While the main purpose of general secondary education is to lead to qualifications giving access to studies at the post-secondary level (universities and other institutions of higher education and to teacher training colleges), secondary vocational education should in addition lead to further vocational qualifications. It should be possible for a transition between the various types of secondary education, e.g. allowing pupils to opt for subjects which are part of the curriculum of other types of secondary education. Furthermore, it should be possible to complete supplementary courses covering both practical and theoretical subjects and thus qualifying for post-secondary education.

Organization of secondary vocational education. One of the most important principles in the organization of the new system of vocational education is that the vocational choice should be postponed as long as possible in order to ensure that young people have a realistic background for their decision.

By giving youth the broadest possible basic education, the highest degree of educational flexibility is ensured. Not only will it be easier for them at a later period to procede to further education and/or re-training, but there will be more opportunities.

The new system of education is being planned within six of the principal areas of vocational training: commercial and clerical fields; iron and metal industry; building and construction; food and beverage industries; graphic trades; service trades (e.g., hairdressing, tailoring, watch-making, etc.).

For each of the principal vocational areas of training a one-year basic education course will be organized in the school, possibly supplemented by workshop practice. At the same time, the pupil will receive fundamental training within his principal vocational area, which will serve as a base for his subsequent training. The pupils will receive thorough vocational and educational guidance. In addition to the basic training, they will study such general subjects as Danish, learning techniques, foreign languages, contemporary affairs, arithmetic and mathematics, psychology, workshop theory and practice. To meet the interests and capacities of the individual pupil, options in creative and artistic activities (drawing, music, art appreciation) may be added to the curriculum. Pupils who wish to continue their general education at a higher level should be given an opportunity to study such subjects as are necessary (e.g., mathematics and physics).

During the period of basic training the pupils should normally opt for one or more fields of training, which successively prepare them for a specialized field. Instruction in the general subjects will mostly be organized as common studies, so that all pupils will receive a minimum of general education.

At the end of the basic training period further training may be arranged in various ways depending on the type of occupation chosen. Though there is as yet no approach to the second part of the training certain perspectives have been considered:

In certain fields there will be a need for short special courses leading to special vocational qualifications. Young people who, after having completed the basic training plus a well-balanced short special course, take up a job should be able to resume their basic education later.

In most trades there is a need for a thorough vocational training lasting from 1-3 years, normally alternating between theoretical studies at school and workshop practice. It has not been decided yet what will be the relationship between the instruction given at school and the training given in the enterprise to which the youth is apprenticed. The training may be divided into steps and at the end of each step the pupil can decide whether to enter the labour market or to continue his training or to change his field. Those who take up work should be able to resume their education or training later.

Pupils studying, e.g., commercial and clerical work, should, at the end of their basic education, be able to supplement their theoretical education with the aim of entering the post-secondary level.

During the second part of the training programme, general education subjects will be studied at a higher level, following the same principles as for the basic education. In the organization of secondary vocational education a system of further education is planned which will supplement the basic education and provide re-training.

The realization of the reform. In 1969 training programmes were initiated on an experimental basis within the iron and metal industry, and the experiences gained are now being examined. In 1971 two experiments in the commercial and clerical field and the service trades respectively, were initiated according to the principles outlined above. Planning of basic education is taking place in the other main areas of industry. When and whether these reforms will be carried out depends on Parliament and on the economic resources available. As the reform will require a substantial increase in the capacity of schools and the number of teachers, some time will elapse before the new types of training can be fully established. In the meantime it is intended to carry out experimental work in order that a final decision will rest on a firm foundation.

Abstract prepared by the Danish Ministry of Education and submitted through the Documentation Centre for Education in Europe.

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Author Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik (Hrsg.)

Title

Bibliographical data

Empfehlungen und Richtlinien zur Modernisierung des Mathematikunterrichts an den allgemeinbildenden Schulen: Beschluss der Kultusministerkonferenz vom 3.10.1968 (Nr. 611)

Translation Recommendations and directives for modern mathematics instruction at primary and secondary schools: resolution of the Conference of Ministers of Education, 3.10.1968 (No 611)

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Federal Republic of Germany
mathematics
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syllabus

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There are four main reasons for modernizing the teaching of mathematics in the primary and secondary schools. First, the progress in mathematics and its consequences to science, economics, and for society as a whole, makes it imperative that the teaching of mathematics in all types of school be reformed and modernized. Secondly, with the beginning of the 20th century mathematics and the natural sciences developed new ways of thinking which, for a better understanding of the world today, need to be more generally known. All adolescents should come sufficiently early into contact with mathematical structures and the methods employed in natural sciences. The third reason is the shortage of mathematics and science teachers, and the reserve which many young people show towards mathematical university studies. This can be overcome only if mathematics at school and university level are brought closer together, in order that young people who have completed their secondary education do not encounter too many difficulties when commencing mathematics at university; this would also shorten the length of the studies. Finally, because the economic growth of every country depends on a sufficient number of specialists in mathematics, science and technology, concerted effort should be made to carry out a thorough reform of mathematics teaching at all levels.

Modernizing the teaching of mathematics at school level. By means of modern mathematics teaching programmes the pupils will encounter new mathematical approaches, new ways of thinking, and will also learn the corresponding written and spoken terminology. Special emphasis should be placed on developing the faculty of thinking in mathematical terms and applying mathematical methods at one's own initiative.

Modernizing the teaching of mathematics would mean having the different facets co-operate closely, e.g. the infusion of algebra and geometry. Essential fundamental notions like quantity, figure, structure (group, circle, body, vector, space) should be repeatedly explained with the purpose of giving the pupil clear ideas and concepts, and develop his capacity for thinking in mathematical terms.

Furthermore it means opening up new avenues for didactics and methodology in the field of school mathematics. Before finally adopting these, however, they should be carefully and thoroughly tested. In classes 5-10 the fundamental mathematical ideas should be introduced in a clear and illustrative manner, while in classes 11-13 the teaching of mathematics should be based on abstract and systematized mathematical thinking. The understanding of mathematical structures and the mastery of their calculations, including their practical application, makes it easier to solve concrete problems. For mathematical exercises modern forms of application should be preferred. The axiomatic method should be introduced at this level, and it should be shown clearly how axiomatic systems, in the modern sense, were attained.

Ways and means. The modernization of the teaching of mathematics at school level will be possible only if new directives are issued for a syllabus which, in the interest of a greater unification of the schools, should be obligatory for all the eleven *Länder* of the Federal Republic. As a result the directives and plans for the teaching of mathematics at school level, decided by the Conference of Ministers of Education on 3 March 1958 and published in the *Bundesanzeiger* on 9 April 1958 were conceived in a new manner. They are contained in the annex to this abstract, and may serve as a recommendation.

The training and retraining of teachers. The success of any programme of modernizing the teaching of mathematics depends, more than anything else, on the training and retraining of teachers. This training should take into account the fact that the aim of a modernized programme of teaching mathematics is conditioned largely by its content matter, the pedagogical methods and didactics being of secondary importance.

University studies in mathematics for secondary school teachers should be completed within four years. During the first semesters the students should be given an introduction to mathematics. An intermediate examination held after four semesters (two years) should be designed to help the student get a clear idea of the aims and objectives of his studies.

The training or retraining of teachers should be designed on a large enough scale to help modernize the teaching of mathematics in all schools. In order to achieve this the co-operation of school and university is indispensable. Institutions in the individual *Länder* (teacher training colleges, institutions for further training of teachers, or for teaching mathematics, science, or pedagogics) have an important role to play in such an over-all scheme. Much can also be done through university seminars, summer holiday courses, correspondence courses, conferences on teacher training and organized discussions between schools and universities. All of these can make important contributions to the modernization of mathematics teaching. Such contributions are valuable only, however, when their results are analysed and evaluated in special school conferences, and then tested by means of experiments, before being finally introduced into the school system.

Annex: *Directives and plans for the teaching of mathematics at school level.*

The directives referred to in the main text above provide a framework. They endeavour to form an up-to-date basis for the teaching of mathematics at the primary and secondary school level. They observe the opportunities for transfer from one type of school to another, and take into account the different qualifications provided by these schools.

The directives cover forms 1-13. The methods and intensity of work must be adjusted to the educational objectives of the different types of school. The subject fields in forms 1-6 should be treated in much the same manner in all types of school. The arrangements of the subject fields should show clearly the objectives of form 4. As yet no directives are given for the final form of the *Hauptschule* (upper primary school). The teaching of mathematics should be adapted to the directives in all forms. In primary school this will become effective no later than the beginning of the school year 1972-73.

In so far as the sequence of the subject fields for the three main levels (forms 1-6, 7-10 and 11-13) are concerned, no definite methodological directives are prescribed. The organization and progress of the new programme of mathematics teaching will be determined largely by present circumstances and by certain basic concepts of methods and didactics. However, premature mathematical formalism should be avoided when possible.

Forms 1-6. The subject fields should form a didactic unity. The first subject field contains certain fundamental principles which are common to them all, and the mathematical concepts, ideas and methods presented there should be repeated at a later stage and emphasized again and again. The subject fields are as follows: (i) quantities and their relationships; (ii) multitude of natural numbers and their relationships; (iii) sizes; (iv) fundamental geometrical principles; (v) numerals and column systems; (vi) divisibility and multitude of dividers; (vii) multitude of non-negative rational numbers and their relationships.

Forms 7-10. The entries after form 8 should be regarded as a key to the division of subject matters, and not as a strict point of separation in the treatment of the various models. In forms 7 and 8 the subject fields are: (i) co-ordination of quantities; (ii) congruency figures; (iii) geometrical sizes; (iv) algebraic forms of statement; (v) algebraic structures. And for forms 9 and 10: (i) real numbers; (ii) similarity images; (iii) powers and their proper functions; (iv) surface area and volume, bodies; (v) plane trigonometry.

Forms 11-13. The first and second subject fields are obligatory for all types of upper secondary school (*gymnasium*). The number of subjects will depend on the number of classroom hours available for the upper forms, where fundamental modern concepts, taken from the field of quantity algebra, logical statements and mathematical structures, and different kinds of proving methods, should be made clear and taken into use. The applicability of mathematics to natural sciences, economics and technical questions should also be taken into account to a sufficient extent. The subject fields are: (i) analysis; (ii) vector space, affinitive and metrical space; (iii) geometric images and figures; (iv) structures; (v) probability theories, statistics, modern mathematical techniques.

Abstract prepared by the Secretariat of the Standing Conference of Ministers of Education and submitted through the Documentation Centre for Education in Europe. The full text in German of the document is available from: Sekretariat der Kultusministerkonferenz, Nassestrasse 8, Bonn.

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Author Title Bibliographical data	Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (Hrsg.) Empfehlungen zur Sexualerziehung in den Schulen: Beschluss der Kultusministerkonferenz vom 3.10.1968 (Nr. 659)
Translation	Recommendations concerning sex education at school: Resolution of the Conference of Ministers of Education, 3 October 1968. (No. 659)
Keywords	Federal Republic of Germany sex education curriculum teacher training

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Education in responsible sex behaviour is necessary if the individual, social and ethical goals of education are to be achieved. Sex education is first and foremost a duty of the parents. The school participates because of its public and legal obligations; but the education is different from that given by the family. At school pupils learn basic facts, enabling them to understand relationships, to acquire an appropriate vocabulary and to come to their own conclusions concerning difficult and unusual phenomena.

Sex education at school should help young people to understand their roles as men and women, to develop their conscience and their sense of values. It should make them understand why moral and ethical decisions are necessary. In trying to achieve this end the efforts of the school complement those of the Church, of religious and ideological groups, and of other educational communities and institutions.

Throughout the period of schooling, the school assumes the task of educating young people towards responsible sex behaviour in relation to themselves, their partner, their family and society at large.

Principles. Sex education at school should be methodical and based on scientific facts. Dealing at school with sexual phenomena and problems implies that they be discussed and illustrated through audio-visual aids. Teaching should be based on conversations between the pupils and the teachers. The latter should show understanding of the pupils' situation and respect for them as individuals. Pupils' questions should be answered objectively, taking into consideration the pupils' age.

Co-operation between parents and school is necessary, since sex education in groups or in forms at school can only become effective if it continues and completes the individual education begun by the parents. In order to ensure continuity parents should have the opportunity to exchange views and discuss problems at parents' meetings. They should be informed sufficiently far in advance of the school's basic attitude towards sex education so that any problems can be discussed beforehand with their children.

The aims of sex education. By the end of the first school year all children should know about the differences between the sexes and the facts of maternity. In the course of the first six school years the pupils should receive instruction concerning the basic biological facts of human reproduction (conception, pregnancy, birth), the physical and emotional changes which occur during puberty, menstruation and hygiene. The attention of the pupils of the early age groups should be repeatedly called to the dangers created by so-called 'child-lovers'.

By the end of the 9th or 10th school year instruction, without being encyclopaedic, should have been given in: conception, human pregnacy and birth, sexual problems of the adolescent (e.g. the relationship between the sexes, premature sexual activity, masturbation), the social and legal basis of sex and family life (e.g. engagement, marriage, family, rights and duties of the parents, rights of the legitimate and illegitimate child), social and ethical problems of human sexual behaviour, penal regulations for the defence of youth, venereal diseases, sexual crimes.

By the end of the 13th school year, including vocational schools, the above-mentioned subjects should have been thoroughly treated, especially ethical, legal and social problems of human sex behaviour. Reference should be made to abnormal forms of human sex behaviour, without, however, laying undue stress on problematic and negative phenomena. The school should try to prevent young persons during and after their school life from transgressing, through ignorance, the sexual norms.

Contributions made by the various curriculum subjects. Sex education at school is not restricted to one specific subject, but can be given in connexion with a number of different subjects. First, biology, which provides knowledge of the principal sexual organs and their function. In this connexion human reproduction and behaviour should not be shown as a mere extension of the law of nature which is applicable to plants and animals. That special responsibility which characterizes man's nature and sexual behaviour should be clearly pointed out. Instruction in hygiene, family life and housekeeping, infant and child care offer the opportunity to discuss sex problems.

Subjects such a 'social studies' deal with social and legal matters and problems concerning sex life, as well as questions of particular interest to young people. In the field of literary and artistic subjects a critical study of literature and art may provide a deeper understanding of human sexual behaviour. Religious instruction explains the theological viewpoint in respect of human sexual behaviour, and what demands this may make on the conduct of every individual.

The subject matter necessary for sex education will be included in the programme of instruction for each individual subject. The contributions made by the various curriculum subjects to sex education may be supplemented and enhanced by means of lectures and organized discussions.

Aids for teachers. In order to achieve the aims of sex education at school, special training or refresher courses should be arranged. Teachers should form study groups at individual schools and teachers' libraries should be supplied with the necessary books. In the course of their professional training teachers should be introduced to the technical, the educational, didactic and methodological problems concerning sex education.

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Classification (for the use of receiver)

Country Federal Republic of Germany

No. 3

CEAS No. 96

Date of issue December 1971

Author	Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (Hrsg.)
Title	*Schülermitverantwortung: Beschluss der Kultusministerkonferenz vom. 3.10.1968 (Nr. 849)*
Bibliographical data	
Translation	Joint responsibilities (participation) of pupils: Resolution of the Conference of Ministers of Education, 3 October 1968 (No. 849)
Keywords	Federal Republic of Germany student participation student council teacher participation

Basic principles. It is the task of the school to prepare young people for life in a democratic society. This task can only be fulfilled if the pupils learn, from the very beginning of their schooling, how to assume responsibility, set themselves tasks, exercise their rights and perform duties. Pupil responsibility, being in effect a form of participation in school life, is a basic principle of equal concern to the school, the pupil, the teacher, the school principal, the school inspector and the parents.

The substance and form of this participation will depend largely on the educational task and objectives of each type of school. Many diverse social, cultural and personal influences are at work in every educational institution. It is, therefore, not possible to make generalizations concerning the form which pupils' responsibilities or participation should take in every instance. It is particularly true that school, as a social institution, is neither a community free from all conflict, nor an enterprise with the characteristic conflicts of the world of labour and industry.

Pupils, parents and teachers have a common interest in enabling the young generation, through instruction and education, to take up positions as responsible members of society. A partnership between teachers and pupils presupposes the acknowledgement of two factors: the

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teacher's special position in the over-all process of education and instruction, stemming from his responsibility, his greater knowledge and skill, and his experience of life; the right of pupils to be heard and taken seriously.

Conflicts are unavoidable and must be considered as a concomitant part of school life. They must neither be smoothed over nor suppressed, but treated in a fair and rational manner. The important question is to deal with these conflicts and find a solution to them which takes into account the interest of those concerned, so that they may be expected to accept that solution.

For the purpose of developing a sense of criticism and co-operation, and thereby social and political responsibility, the pupils should be given the opportunity to set themselves tasks according to their age and maturity. They should also be given the opportunity to assist in solving certain school problems and to represent their own interests.

Pupils' participation and responsibilities play an important role in developing school democracy. They are also a significant means of promoting self-education among pupils and preparing them for life in a democratic society.

Tasks. Pupils' participation and responsibilities imply the following tasks.

Voluntary tasks: These imply projects and voluntary study groups on such topics as politics, science, art, sport and social questions. Such groups should be open to all pupils and should not serve exclusively the aims of particular political, religious or ideological organizations.

Order and organization in the school: These include tasks which directly concern the daily life of the school, such as organizing school celebrations, sporting events with other schools, study trips, guided tours, road safety services, etc.

Representation of pupils' interests: In certain circumstances this implies the participation of pupil representatives in staff meetings. If individual pupils so request the pupils' representatives may assist them in defending their rights, especially in matters of discipline and complaints. All regulations and rules issued by the School Board of importance to the pupils should be made accessible to them. Regular meetings for consultation and exchange of views on current school problems should be arranged between representatives of the pupils and the school principal. Depending upon their age, the pupils' representatives should be permitted to participate in the planning of programmes of instruction.

Organs. Committees consisting of representatives of pupils shall be elected in every school. Their activities are limited to each of the individual schools concerned. The committee of pupils' representatives consists of spokesmen for individual school forms, and spokesmen for the school at large. These are elected by secret ballot for one school year. The committee may be divided into several sections, representing the various age groups within the school. With the consent of the school direction it may organize meetings for reporting and discussion purposes.

Within the framework of the regulations in force in each of the *Länder*, statutes may be drawn up governing the detailed organization and proceedings of the committee. The committee or the pupils as a whole, may elect members of the teaching staff for the purposes of serving as its advisors and undertaking liaison work between the committee and the teaching staff. Committees consisting of members of staff and pupils' representatives may be formed in individual schools for the purpose of discussing and dealing with problems of school life, which are of interest to both parties.

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Author Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (Hrsg.)

Title *Empfehlungen zur Hauptschule : Beschluss der Kultusministerkonferenz vom 3.7.1969 (Nr. 130)*

Bibliographical data

Translation Recommendations for the secondary modern school: Resolution of the Conference of Ministers of Education, 3 July 1969 (No. 130)

Keywords

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compulsory education
secondary education
pre-vocational education
vocational guidance
curriculum

The transformation of working and production methods in all sectors of the economy, changes in consumer habits, the growing mobility of the working population, modifications in the entire social structure, and the demands made on young people to accept responsibilities as future citizens, all these factors make it necessary for the secondary schools to renew the content of their curricula, and their working methods. This is particularly true in the case of the secondary modern school (*Hauptschule*) whose pupils enter the labour market sooner than those of the other types of school.

The German Committee for Education and Pedagogical Training (*Deutsche Ausschuss für Erziehungs- und Bildungswesen*) has emphasized the necessity to pay closer attention, in the work of the schools, to themes which may be considered to be of particular significance for our times, pointing out specially the need for instruction in such fields as natural sciences and technology, economics and industry, politics and social affairs.

The Standing Conference of Ministers of Education and Cultural Affairs approves and supports the following recommendations, believing that the secondary modern school is now faced with new aims and problems, which can no longer be solved in a traditional manner.

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The secondary modern school should enable the pupils to: (a) find their way in cultural life; (b) integrate themselves into the political and social life of the community; and (c) participate in working life according to their abilities. These three goals may be considered to be of equal importance, not only for the secondary modern school, but also for other types of school.

The preparation of the young for the world of the grown-up by means of the traditional subjects alone is no longer in keeping with the demands of our times. The secondary modern school must be in a position to offer new subject matter and new methods in its programme of instruction, which should serve to encourage a stronger motivation for learning in the pupils. This will enable them to acquire the abilities, knowledge and skills that are indispensable if they are to play a full and satisfactory role in their working and social life.

Recommendations for forms 7-9 (10) of the secondary modern school. Forms 7-9 (10) of the secondary modern school form a pedagogical entity and the particular task is to prepare pupils for participation in working life. This is to be achieved by means of instruction for work life (*Arbeitslehre*), which is to be introduced as a subject in its own right. Close co-operation between the teachers of the secondary modern schools and the vocational schools is, therefore, highly desirable.

The programme of instruction most offer one foreign language and mathematics, which is to be differentiated according to levels of performance. In German, physics and chemistry, a differentiated programme of instruction (division of forms into performance groups) is strongly recommended. Differentiated programmes of instruction, according to the pupils' inclinations, as well as groups catering for special interests, should also be organized. This type of programme normally requires bigger schools with several parallel forms, a larger number of teaching personnel, and improved equipment. Close co-operation with other types of school at the same level would seem to be highly advisable.

In carrying out the programme of instruction in form 9 (and 10) close attention should be paid to the inter-relationship of the various subject fields (integrated instruction). The teaching of the obligatory foreign language, usually English, has the main aim of providing the pupils with a fundamental knowledge of the spoken language.

It should be possible for every pupil, without loss of time, to obtain the leaving certificate of the intermediate school (*realschule*), or some other equivalent certificate.

In forms 7-9 (10) the number of periods per week should not exceed 34. For half of these periods the forms should be divided into smaller units.

Recommendations for instruction for work life (Arbeitslehre). In this subject the pupils should acquire an insight into and an understanding of matters pertaining to technology, economic affairs, social affairs and politics, which today must be considered a necessary part of the fundamental education of every citizen. Furthermore, each pupil should obtain general orientation which, without constituting any direct vocational training should serve as a preparation for the choice of a career.

There should be a general orientation concerning economic and social life illustrating the general structure of the economy and its various sectors, as well as the demands made for proficiency in the various branches, seen from the technical, economic and social points of view. Thus the adolescent should acquire an understanding of the world in which he will be living.

Education in respect of work attitudes should, in the main, follow the objective of enabling the pupil to develop and exercise such fundamental working attitudes as concentration, accuracy, adaptability, co-operation with others, as well as the facility to think in economic terms and understand planning procedures. This programme of instruction precedes the development of more specialized skills and qualifications.

The orientation concerning both individual and groups of occupations should be designed to make it easier for each pupil to select his future career. On the basis of the general orientation concerning the world of labour and industry, and the training for working attitudes and habits, the choice of occupation which is normally made at the end of form 9, becomes a decision open to later revision. In this connexion the co-operation of the school, and the career guidance service, with the participation of medical specialists and psychologists, is of major importance.

All these subject fields should be made accessible and meaningful to the pupil by means of practical activities and a full theoretical study. With this aim in mind the following measures, among others, will have to be taken: a revision of the instruction provided hitherto in handicraft, homecraft and home economics to be oriented towards natural sciences and technology; study visits to business enterprises, and practical work in them.

Instruction for work life covers all subjects which are of a practical nature, or closely related thereto, and which serve to deepen the pupil's understanding of the economic and social life, and prepare him for his choice of occupation.

The contents should, in general, be chosen by way of examples and should take the following main factors into consideration: the functional aspects, particularly in respect of work efficiency and organization of labour; the social aspects, with particular reference to co-operation and possible areas of conflict; the aspects relating to occupational guidance, to promote an individualized and gradual choice of occupation.

The themes listed below may be considered characteristic of this intention without representing a compulsory programme: (a) the use of tools and machines; the compilation and use of tables, charts and card indexes; the writing of texts for various purposes; the planning and organization of a business enterprise; rationalization, automation; (b) staff and organizational structure in a business enterprise; competition; trade unions and other associations; legal questions; working hours; (c) criteria for a choice of occupation, inclination and ability, advancement, further training.

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Author	Kristiansen, Rolf
Title	*En undersøkelse av norske grunnskolelæreres informasjonsbehov og mediapreferanser*
Bibliographical data	Thesis for the Cand. Paed. degree, Oslo University, 1971. Stencilled, 111 pages + appendices).
Translation	An investigation into the need for information and the media preferences of Norwegian teachers in schools for compulsory education.
Keywords	Norway information libraries mass media teachers

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The purpose of this investigation was to clarify a few specified problems related to the dissemination of information to educators. The investigation was undertaken as a survey research, based on questionnaires sent to a 3% sample of members of the Norwegian Teachers Association. Within 3 months, and after 5 follow-ups, 555 teachers (or 94.1%) had responded. The final data base was constituted by 509 respondents. Teachers with an academic degree were under-represented in the sample.

The first aim was to discover which channels are used by Norwegian teachers to obtain professional information about problems within their field. It was shown that teachers today make wide use of mass media as well as more personal sources of information, while information from central school authorities reaches more than half of the teaching staff only through intermediaries. This may not give a true picture, as the material offers no possibilities of studying the interaction of information sources. For instance, mass media may sometimes be thought of as the source of information when in fact they only act as intermediaries for the Ministry of Education, the Council for Innovation in Education, etc.

As far as printed information materials, i.e. books and journals, are concerned, the investigation shows that about 95% of the teachers made use of books to obtain

information, while 65-75% stated that they used journals.There was a marked difference in the way these sources were obtained: a large proportion of the books were purchased by the teachers, while access to journals was much more often obtained through libraries. It is rather surprising, however, that given a free choice between books and journals, about twice as many teachers would prefer journals to books as information sources. When a large majority still actually make more use of books this may be explained by the fact that the number of Norwegain educational journals is small and perhaps they do not cover the field of greatest interest to ordinary teachers.

One practical conclusion which might be drawn from the investigation is that, when information programmes for teachers are being planned, more emphasis should be placed on personal sources, i.e. contact with other teachers, meetings, seminars. These methods are given a high rating by the teachers. Many teachers make use of these types of information sources, consider that they gain more from them than from other sources, and give them preference when there is a free choice.

By comparison the attitude to libraries was less enthusiastic, especially in those cases where loans from a library had to be arranged by post. Only about one fifth suggested development of the library service as a means of improving information for the educators. No attempt is made to establish the cause for this attitude, but the author suggests two possible explanations: either educators today are not given adequate training in the use of libraries, or the libraries themselves are not meeting the needs of teachers, perhaps because libraries tend to be organized more as storage, than as retrieval systems.

The investigation revealed that radio and TV were used equally frequently as sources of information. Teachers also considered that the two media were about equally useful as information sources today. But given a free choice nearly 53% indicated that they would like to have special information programmes on TV, while only 19% indicated the same for radio.

It was established that teachers felt the need for information to be greatest in matters related to their practical everyday work, e.g., information on instructional materials, educational methodology, textbooks, other teachers' experiences, etc. Very little interest was displayed for information on the organization and administration of the education system.

About 60% of the teachers found the situation as far as professional information is concerned more or less satisfactory.

Certain hypotheses were tested against the collected material and confirmed to some extent the impressions given by the direct answers to the questionnaires. Mass media and personal contacts were the most frequently used sources of information. With the exception of books, personal sources were generally estimated to be better than distant, impersonal ones. This was also apparent from the choice of methods of information: courses and meetings were preferred to all other possibilities.

New teaching aids was the subject indicated by most respondents as something they wanted more information about. This was the only theme that was given a clear preference, but things of a similar practical nature generally ranked high.

More interesting perhaps were the cases where the testing of a hypothesis involved correlation between several variables. It was assumed that the choice of information channel would depend on the respondent's age, previous training, and type of teaching position. It was also assumed that the preference for personal information sources were more typical of younger than of older teachers. This last assumption was not confirmed by the available material.

On the other hand it was established that a respondent's educational background was significant for this versatility in choice and use of information media: the number of information sources used increased in proportion to the length of training. This means that teachers with a training beyond the basic teaching certificate were more motivated or had better opportunities to extend their knowledge in the field even more. The practical conclusion to be drawn from this would be that a differentiated system of information should for certain groups be confined to a small number of media. Priority should be given to methods which involve personal contacts, and to mass media.

The type of position a respondent held within the education system was also assumed to be significant. The material confirmed that teachers in administrative positions more often read educational literature of a theoretical nature, reports from educational committees, proposals for educational laws, etc., and that they subscribe more often to educational journals. But with regard to information on practical problems and loans of educational journals no significant differences were found. It is doubtful whether the differences in the reading of the type of material mentioned should be ascribed to the form of the more theoretical and official publications, or whether reading preferences reflect different interests among various groups of teachers. But it would no doubt be worth while to publish all types of educational material in a form which was more readily assimilable by larger groups.

Another hypothesis was that the need which was felt for information would be related to the degree of urbanization, to the level of education, and to age. It was assumed that need for information would increase with the degree of urbanization, but this was not confirmed when the hypothesis was tested. On the contrary, the need for information seemed to increase with the distance from an urban centre. It was further assumed that longer education would result in increased demand for information. Here, too, it was rather the contrary that seemed to be true, which is perhaps not surprising in view of the fact that the length of education shows correlation to a more varied use of information media. The material confirmed, however, the assumption that younger teachers felt the need for information more keenly than older teachers. It was also possible to show that this was particularly true for information on matters respecting practical teaching, but attempts to compare information needs on other topics did not give any clear results.

The results of the investigation correspond fairly well with other investigations of a smiliar nature, especially with regard to the preference for personal sources and the wide use of mass media. Also the media preferences of administrative personnel reveal the same trends which have been found in Denmark and the USA. The preference for information on practical topics, useful for everyday work in the classroom, has also been found in Sweden and the USA.

The investigation shows that a large proportion of the teaching staff feel that they are not sufficiently informed professionally. Whether this should be blamed on the teachers themselves, the training provided for them, or the education system in which they work is outside the scope of this study. But the investigation demonstrates that an information programme for teachers is badly needed, and it also shows the importance of analysing the aims and evaluating available means before such a programme is introduced.

Abstract prepared by Mr. Olav Nyhamar, Ministry of Education, Oslo, and submitted through the Documentation Centre for Education in Europe.

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Author
Title
Bibliographical data

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Tawçiyât al-lagnah
Tripoli, Ministry of Education and National Guidance, 1971. 10 pp. (stencil).

Translation

Working group on evaluation and examination methods in the States signatory to the Tripoli Pact, held at Tripoli from 6 to 11 March, 1971. *Recommendations...*

Keywords

Libya
Sudan
Syria
United Arab Republic

evaluation of achievement
examinations
secondary education
special education

At the First Conference of the Ministers of Education of the States signatory to the Tripoli Pact (1970) it was agreed that joint commissions should be established to examine various questions concerning the co-ordination of education in the States concerned (Sudan, Libya, Syria and the United Arab Republic). One result of this decision was the creation of a working group on evaluation and examination methods which met at Tripoli 6-11 March 1971 and made a number of recommendations.

With regard to methods of evaluation and their impact on the educational process, the working group recommended that the atmosphere of awe surrounding traditional methods should be eliminated and that the responsibility for evaluation and examination should be largely entrusted to the teacher. Evaluation should continue throughout the year and embrace the entire educational process and should be recorded in the pupil's school record-card. It should aim at helping students to develop their personality and guiding them towards the most suitable type of education, through an assessment of their intellectual abilities, inclinations and aptitudes. Use must also be made of evaluation for the purpose of identifying gifted, outstanding and backward pupils, in order that they may receive the necessary attention.

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The working group examined the general principles governing the choice of examination questions. They should seek to measure the student's intellectual qualities - his powers of comprehension, reasoning, judgement, application of knowledge, analysis, etc. - rather than his capacity for learning things by heart. It recommended that attention should be paid to the form in which questions are set: their meaning should be clear and their content should be varied in accordance with the instruction provided. It was important to put the easiest questions at the beginning of the paper so as to encourage the students, and to set questions which the average student could answer within the time allowed. The questions should be objective, in order to minimize the human factor in evaluating results, and realistic, i.e. appropriate to the level and environment of the examinees and to the conditions under which the examination is held.

With regard to marking, the working group recommended that model answers should be provided for each subject, and considered in advance by a board composed of subject teachers and technical advisers which would decide on the distinction of marks. Due consideration should be given to any explanatory diagrams (e.g. maps) which students might provide, and to the ability to marshal facts and think logically. Each question should be 'weighted' internally for its various parts and the intellectual responses demanded. Care should be taken to choose suitable examiners from among specialized teachers and to entrust each one with the marking of one single question; and competent revisers should be assigned to each commission to ensure that examiners had reported and marked in accordance with the model answers provided.

With regard to the development of evaluation and examination methods at the pre-secondary and secondary (in Sudan, general secondary and higher secondary) school levels, the working group recommended that for purposes of promotion examinations the school year should be divided into two periods and that the subjects of the curriculum should be distributed among them. Students would be graded on the basis of their work during both periods, which would carry a proportion of not less than 30% of the maximum marks for each subject. The remainder would be awarded on the strength of a written examination to be held at the close of each period. Responsibility for the organization and proper conduct of these examinations would rest with the school authorities. It was also recommended that the marks awarded in the course of the school year should be divided between the activities related to each subject, oral and practical tests and daily work, in addition to monthly written tests, and that precise criteria should be laid down in order to ensure accuracy and objectivity in the evaluation of students. The question of adding marks obtained for religious instruction and civic instruction to the total was left for each country to decide in the light of its own special circumstances.

At pre-secondary level, the working group's recommendations regarding pass marks may be summarized as follows: the student's aggregate marks must total not less than 50% of the aggregate of maximum possible marks in all subjects; furthermore, he must obtain not less than 50% in Arabic and in religious instruction, and not less than 30% in the remaining subjects which the Khartoum Conference agreed to unify. The question of the method to be adopted for marking technical, social and practical activities and etc., was left for each country to decide in the light of its own particular circumstances.

In order to pass, at secondary level, students must obtain not less than 50% of the aggregate of maximum possible marks in all subjects, not less than 50% in Arabic and in religious instruction, and not less than 30% in each of the remaining subjects. In those countries which allow students to sit for their examinations a second time, the minimum pass mark may be lowered to 20% in two subjects.

With regard to general certificates, which differ in the various countries of the Tripoli Pact, it was recommended that the question of uniformity be investigated more fully as soon as possible. The suggestions made for the organization and unification of promotion examinations should be borne in mind and also the problem of whether the principle adopted was that of option or of an extension of streaming. It was clear there would have to be a very flexible approach to the question.

For the handicapped children it was recommended that a further meeting should be held, attended by specialized teachers and experts, to develop methods of evaluating these pupils. In the meantime backward pupils should be allowed to sit for promotion examinations and general certificates, and blind students should be able to use braille for writing and reading whatever possible. Handicapped children whose disability prevented them from writing should be assisted by another pupil provided the latter's educational level was below that needed to pass the examination; in certain circumstances handicapped children might be exempted from examinations. At the same time, a plan should be urgently drawn up for training teachers, instructors and counsellors in the field of education for handicapped children, either by arranging study missions abroad or by engaging experts in cases where the necessary expert knowledge is not available in the Tripoli Pact countries or in the other Arab States.

Finally, the working group recommended the use of standardized terminology in matters relating to the evaluation and examination of students. The most important of the standards proposed: test; examination; examination centre; examination hall; examining body supervisor; weighting committee; examining commission; examiner; registration of marks; evaluation sheet; seating plan. It was recommended that the standardization of terms should be continued at a further meeting.

Abstract prepared by the Educational Documentation and Research Centre, Cairo.

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Author Lagnat tatwîr al-imtihânât wa- taqwîm al-tollâb fî marâhel al-ta'lîm al-qâhira

Title *Taqrîr al-Lagnah*

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Translation Commission for the Development of Examinations and Student Evaluation at the Different Levels of Education. *Report of the Commission* ...

Keywords
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Methods of evaluation are considered to be among the most important factors of the educational process, and it is therefore desirable that they should be continually developed. It had been observed that existing examination methods had become notoriously rigid and complex and were tending to be considered an end in themselves rather than one of a number of methods for the assessment of pupils. As a result of this attitude, excessive emphasis was placed on the accumulation of facts and many aspects of education was neglected in the teaching process, with harmful effects, that included recourse by students to special tuition and the use of textbooks other than those prescribed. The fact is that examinations in their present form measure only what students have learnt by heart, and hence do not encourage organized reflection, original thought, or invention. The need for special tuition inspires the student with a lack of confidence in his teachers, his school, and even in himself. There are, moreover, other disadvantages: the great expense involved in organizing examinations; the time spent on their preparation, and supervision and the publication of results; physical and psychological strain undergone by the candidates and the fact that they are tempted to cheat. Moreover, the marking of examination questions is often influenced by the personality of the examiner; while the questions themselves make no allowance for the dissimilarities between individual pupils and fail to measure

the comprehensive development of each pupil's personality.

The Commission considered that the reform of evaluation methods should be done in two stages. First, the introduction in the 1971-72 academic year, and within the provisions of existing legislation, of a short-term plan designed to solve the problems arising from the tremendous quantitative expansion in education. This would be followed by a long-term plan requiring new legislation and covering the entire field of educational development with special reference to the following points: elimination of shortcomings in the educational system; endorsement of the concept of examinations as a method for measuring the over-all development of pupils and not as an end; recognition of the role of the teacher, because of his direct contact with the pupils, in evaluation; elimination of the strain and anxiety to which pupils are subjected by examinations by reducing the number of papers; aggregation of related subjects into groups with maximum and minimum marks; reconsideration of the existing division of the secondary school level into science and arts sections; classification of subjects as either compulsory or optional; freedom for each faculty or institute to select the subjects to be offered by candidates and the pass marks required; reconsideration of the type of questions set with a view to making them more objective and a better instrument of over-all assessment.

The short-term plan. This arises out of the observations made in the field of primary education during the application of Law No. 210 of 1953. The Government did not succeed in implementing the idea of special 'remove' classes for repeating pupils. The result was that pupils were automatically promoted every year as far as the 6th grade, which meant that some of them reached this grade without having learnt to read and write. Law No. 68 of 1968 and Ministerial Order No. 225 of 24 December 1968 provided for an examination to be held at the end of the 4th grade; pupils failing the examination were allowed to remain in the 4th grade for one year, after which they automatically went up to the 5th grade. This system was applied in 1968, 1969 and 1970, but it was observed that the new examination was not being taken seriously enough. The Commission, therefore, decided that for 1971/72 the 4th grade examination would be supervised at local level by heads of sections and at central level by the general directors responsible for the various subjects; the directorate-general for primary education would prepare model questions based on the 'objective' method; the officials responsible would make surprise inspection visits to check on the conduct of the examination; and special attention would be paid to evaluation operations during the academic year. It was also decided that failure in religious instruction should not prevent promotion to the 5th grade; it would only be necessary for a pupil to pass in Arabic and mathematics (arithmetic and geometry). It was further proposed that pupils promoted to the 5th grade after failing in the 4th for a second time should be placed in a 'remove' class where they could receive special attention; and that the pupils who had been absent for a long period with a legitimate excuse should be judged on their end-of-year marks alone and not those awarded in the course of the year. It was proposed also that for the primary school certificate examination the minimum pass mark for Arabic and mathematics should be 50 out of a total of 100 marks, and a maximum of 50 marks for sciences and social subjects, with a pass mark of 40% instead of the 50% currently in force.

With regard to pre-secondary education, the following proposals were made: for promotion examinations, the pass mark should be 30% of the maximum possible marks for every subject studied during the year, except for religious instruction (50%) and civic instruction (60%), precise criteria being laid down for the apportionment of these marks; the school year should be divided into two periods, each ending with a written examination, the pass mark in each subject to be 35% of the maximum possible marks in each subject; pupils failing should sit for a second examination. It was proposed to confine the examination to the following subjects: religious instruction, Arabic, a foreign language, social subjects, civic instruction, science and mathematics. Home study pupils would be given the opportunity to sit for the promotion examinations, but marks would only be awarded in respect of written papers.

At secondary level, it was proposed that the same system should be applied as for the pre-secondary level but that the examinations should comprise four groups of subjects: (a) religious instruction and languages; (b) social sciences and civic instruction; (c) biology and physics; (d) mathematics. For art, physical training and practical activities the marks awarded during the school year would be a sufficient criterion. Examination marks for religious instruction and civic instruction would not be aggregated to the pupil's total marks. This system would be applied to the 1st grade. In the 2nd and 3rd grades of the 'arts' (humanities) section, examinations would be held in religious instruction and languages; social subjects and civic instruction; and philosophy subjects and civic instruction. In the 2nd and 3rd grades of the science section, examinations would be held in religious instruction and languages; physics and biology; mathematics; and civic instruction. In order to pass, pupils would be required to obtain at least 40% of the maximum marks in each group, and 20% of the maximum in each of the subjects in that group. In addition to this minimum pass mark, they would be required to obtain 50% of the aggregate of maximum possible marks for the written examinations and the year's work in all subjects combined. They would be allowed to sit a second time (a) if they had obtained 50% of the aggregate maximum but had failed in one or two subjects, (b) if they had obtained less than 50% of the aggregate maximum but had passed in all subjects, or (c) had both obtained less than 50% of the aggregate maximum and also failed in one or two subjects.

In teacher training colleges, it was decided to abolish end-of-year promotion examinations in certain subjects, viz. practical agriculture, domestic science, physical training and art and to treat the marks awarded during the course of the year as a sufficient criterion. In the case of other subjects, marks awarded during the year would be weighted 40%, and the yearly examination 60%. Examination questions should be clear and simple, comprehensive and varied and formulated under constant technical guidance. In addition, precise rules should be laid down for correcting them and the evaluation methods supervised at all levels.

The long-term plan. Primary education should be divided into three stages, with a test at the end of each stage. Pupils failing at the end of the 4th and 6th grades would receive special attention and would either repeat that year or be transferred to remedial 'intellectual training' classes. If compulsory education were to be extended to the age of 15 years, then the end-of-year examination at the close of the three stages would take place at the level of the school and the primary school certificate would accordingly be abolished. This would mean paying increased attention to teacher training, limiting the size of classses, attaching greater weight to the marks awarded during the school year and placing considerable emphasis on objective testing.

At pre-secondary level the following proposals were put forward regarding promotion examinations: 40% of the marks should be awarded for work during the year, 50% for both mid-year and end-of-year examinations together, and 10% for assiduity; a proportion of the written examination marks should be earmarked for oral proficiency tests in the foreign languages studied. Pupils failing in a subject would be allowed to move up to a higher class provided they had obtained at least 20% in that subject, passed Arabic and obtained 60% of the aggregate of possible marks for all subjects. Pupils failing in two subjects would be allowed a second attempt, consisting of a single written examination lasting one day, provided they had at least 20% in those two subjects and at least 50% of the aggregate.

Marks for the pre-secondary certificate would be awarded entirely on the basis of the end-of-year written examination, except that 5 extra marks would be awarded to pupils with an assiduity mark of 90%. Maximum and minimum pass marks would be the same for all subjects. To be successful, a pupil would be required to obtain 50% of the aggregate; pupils failing in one subject(excluding Arabic and religious instruction) but obtaining at least 25% in that subject and 60% of the aggregate would also be allowed to pass. It was proposed that, whenever possible, questions should be printed on the answer paper, and that there should be a graded progression from objective questions in the first grade to questions requiring interpretative ability in the last grade. Each question should have a specific purpose and there should be one or more questions on out-of-school reading and general knowledge.

At the secondary level it was considered that pupil evaluation should be linked to the future form of the secondary school, which is likely to be comprehensive. The following proposals were put forward: there should not be more than four compulsory subjects; a larger proportion of over-all marks should be allocated to work done during the year; greater attention should be paid to the applied, practical aspect of the various subjects. Should the present structure of secondary education remain as it is, the system of streaming, specialization and classification of subjects should be reviewed. The number of examination subjects should be reduced and the year's work accorded a heavier weighting. University officials should be consulted with a view to the drafting of enrolment conditions for each faculty and higher institute.

With regard to teacher training colleges, it was considered that the system of continuous round-the-year evaluation should be adopted, as this would produce more accurate results than the present practice. Except in the final year, it should be based on the results of oral and written tests, and on the student's conduct within the college. It was proposed that, in order to pass, candidates should be required to obtain 50%

of the aggregate and not to have failed in any subject; students failing in two subjects (excluding religious instruction) would be allowed to sit a second time, but students failing in practical work would not be allowed to sit the examination at all. Marks in religious instruction and civic instruction would not be added to the aggregate. At the final diploma examination, candidates would be required to pass a practical test.

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Author Wizârat al-tarbiyyah wa'l-ta-lîm

Title *Taqrîr mouqaddam min al-goumhouriyyah al-'arabiyyah al-mouttahidah ila al-lagnah al-moushtarakah lidirâsat ouçous tawhîd al-ta'lîm al-fannî wa'l-mihanî bayna doual mîthâq târâbouls*

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Translation Report submitted by the UAR to the Joint Commission set up to study the basic principles for unifying technical and vocational education among the States of the Tripoli Pact

Keywords
United Arab Republic
educational reform
technical education
vocational education
curriculum

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The Joint Commission set up to study the basic principles for unifying technical and vocational education in the four Tripoli Pact States (Sudan, Libya, Syria and UAR) met in Damascus in March 1971. The UAR delegation submitted this report which contains the views and proposals of its Government.

The Arab community of the States signatory to the Tripoli Pact is going through a period of rapid and comprehensive development towards better living conditions. Considering the analogous past history of these States, their common destiny and goals, the comparable conditions, the scope and resources of their productions, their requirements in terms of technical know-how and skilled manpower, and the need to overcome the difficulties attending the introduction of foreign expert knowledge, the development and coordination of technical education must be regarded as a matter of the very highest priority. It will enable these States to secure the scientific and practical skills called for by their closely related and complementary economies and resources, the union between their peoples, and facilitate the exchange of specializations, and the movement of students from one country to another - all of which is bound to have a favourable impact on both the technical and the aesthetic aspects of production and on the satisfaction of consumer needs.

Technical education has an important part to play, together with general education, in the formation of healthy, balanced and patriotic citizens, eager to serve the community, fully equipped for a life in a socialist, democratic and cooperative society, imbued with pride in their Arab heritage, and aware of the inhumanity of racial discrimination and determined to combat it. Technical education also seeks to attain certain general objectives of a vocational character, namely: to train skilled workmen and technicians and equip them with the knowledge, skill and culture needed for work in industry, commerce and the services; to develop their professional conscience, raise their aesthetic standards and inspire them with an attitude of loyalty and respect towards their work; to improve their standard of performance in the production enterprises through continuing contact with the sources of the latest technical advances; to place technical specialization on a broad, polytechnical footing that will make it easier for graduates to adapt themselves to different conditions and fields of employment; to acquaint students with their vocational rights and obligations and imbue them with the appropriate behavioural habits and with respect for their statutes and traditions.

The first stages of technical and vocational education should begin after at least nine years of general education. A distinction should be drawn between the training of skilled workmen and that of technicians in respect of both level and curriculum. The period of study should be 3 years for skilled workmen and 5 years for technicians, commencing after the student has obtained his pre-secondary (intermediate) certificate.

Technical and vocational education should be planned on the basis of statistics and data or the community's manpower requirements, both for levels and numbers needed for the various occupations, having regard to the demands of the development plan and in accordance with clearly defined priorities. Representatives of the various production and service sectors should participate in the study and definition of enrolment conditions and graduate qualifications. Linked with this planning should be a programme for the training of a sufficient number of teachers to ensure the development of this type of education and for providing the necessary material facilities (buildings, installations, teaching aids and equipment, implements and tools).

With regard to the general basic principles of the curricula, the UAR reaffirms an earlier recommendation by the Commission for Unifying the Basic Principles of Curricula in the Arab

States (Cairo, 6-18 November 1965), regarding the need to take national, social, economic, pedagogical and psychological factors into consideration when drawing up curricula. It recommends that the relationship between general and technical education should be strengthened by the inclusion in the stages of general education, which preceedes technical and vocational education, of a certain amount of vocational instruction and practical work to familiarize the student with the fields of work and with production. It also recommends that study programmes should be flexible enough to keep abreast of contemporary technological progress, taking into account domestic circumstances, the general trends of the national economy, and the requirements of development plans. These programmes should include: (a) subjects of general culture (religious instruction, Arabic, foreign languages, social subjects and humanities), the emphasis on these subjects will gradually decrease as the student progresses and more time will be devoted to study of and practice in the subjects of vocational specialization; (b) basic scientific subjects (mathematics, chemistry, physics, natural history, industrial hygiene). General and special technical subjects, practical work and physical training should also be included.

As regards industrial education, the UAR considers that the level, special objectives and the purpose of the various subjects of study should correspond to the hierarchy of occupations in the industrial sector, i.e., workmen, technicians and engineers. Workmen are divided into ordinary, semi-skilled (these two categories do not need any special preparation in technical training institutions), skilled and highly skilled. For training skilled and highly skilled workmen, the industrial apprenticeship is not considered to be appropriate to conditions in developing countries. They should be trained in industrial secondary schools, which should be required to inculcate in their students: the technical skill, accuracy and knowledge needed to enable them to do well in their chosen professions; a scientific, critical approach and a cultivated judgement; an understanding of the role of the individual in the community; a developed sense of responsibility; practical familiarity with the economics of labour; healthy living habits and sound civic and ethical attitudes. Subjects in this branch of education should be divided, broadly speaking, into: general culture subjects; basic principles of the relevant sciences and their application: scientific and practical technical subjects; practical vocational drill. The aim of each of the subjects in these four groups should be clearly defined. For the preparation of industrial technicians a further group should be added, according to the particular field of specialization, comprising cultural and artistic subjects treated at the technical level.

The aim of commercial education is the pre-service and in-service training of the necessary labour force for commercial, financial, accounting, management and clerical tasks in the private sector and for employment in companies, co-operative societies, government departments and other bodies and corporations. The curricula for commercial education should contain in addition to subjects of a general or civic character, various technical subjects such as book-keeping, commercial arithmetic, secretarial work, typing in Arabic, and foreign languages, commercial and economic education, organization of labour, and social security.

As regards agricultural education the aims are to produce agriculturists with a sufficient practical and theoretical knowledge of all types of agriculture which will enable them to direct work efficiently and assume responsibility for a private or state-run agricultural project, and to provide the skilled workmen and agricultural technicians required by government and private enterprise in the field of agricultural production. The curriculum should contain, in addition to subjects of general culture and the rudiments of science, technical agricultural subjects (theoretical and practical) and practical work. The relative emphasis on the various subjects in the curriculum should vary according to whether the pupils are studying to become skilled workmen or agricultural technicians. Practical training is the basis for the preparation of skilled workers, and the conditions of work in each school should correspond to the type of field training available in the surrounding countryside. Therefore, starting from 1971/72, the following specializations should be included, on a trial basis, in the training of skilled workers: sugar-cane cultivation; operation and maintenance of agricultural machinery; fruit-growing and forestry; cultivation of citrus, mango, and vegetables; animal husbandry. With respect to agricultural technicians, the creation of colleges at the national level for the following specializations is under examination: land reclamation and mechanized production of plant crops; animal husbandry; pest control; milk production; farm industries.

In order that the study programmes and curricula for the various types of technical education may be successfully implemented, it is necessary to pay increased attention to the selection and training of technical school teachers, and to ensure that outstanding pupils are given the opportunity to broaden their knowledge and experience through scholarship grants for study within the country and abroad. Special attention should also be paid to school textbooks, teachers' manuals, teaching aids and equipment, working materials, scientific equipment, tools and instruments. It is important, too, that the evaluation of pupils should continue throughout the year, that the progress of graduates in government and production enterprises should be kept under review, and that the equivalence certificates awarded in the various Tripoli Pact States should be recognized in order that their holders may be able to move freely from one country to another.

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Translation

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A view of education in the Arab region through the lens of the Third Regional Conference of Ministers of Education and Ministers responsible for Economic Planning in the Arab States held in Marrakesh in January 1970. A review and evaluation of education during the last ten years as well as a look into its future, in terms of aspirations and possibilities of development, has been made with due consideration to social and economic setting and trends in the region. The document contains four chapters: the social and economic background; recent achievements and existing problems of education; the work and resolutions of the Marrakesh Conference; educational perspectives in the Arab region for the 1970's; and two appendices, one an exercise made by Unesco Office of Statistics showing what seem to be reasonable objectives for education expansion and improvement in the following decade in the region and the other consisting of statistical tables related to the document.

The first chapter deals with three main points that have major effects on education, viz., the demographic characteristics, the working population trends, and the economic structure in the region.

Under the demographic characteristics attention is drawn to: (a) the high rate of population growth (approximately 3% in the late 1960s and over 3% in the

1970s; (b) the high proportion of rural population (67% in 1965 and an estimated 59.4% in 1980) with a very low annual per capita income that rarely exceeds $60 on the average; (c) the high proportion of children in the Arab population (more than 42% of the total population in most countries of the region is below 15 years of age and 26% is between 5 and 14; these proportions are expected to increase in the 1970s).

The UN Population Division estimates that by 1980 48 million more Arab consumers will be added to the present total of 128 million. This increase includes 14 million children between 5 and 14 years of age to be added to the 1970 figure of approximately 33 million, more than half of whom have no place in schools.

In the part on the working population trends, the document presents the following facts:

(a) Only about 50% of the total population in the Arab countries is between 15 and 64 years of age (compared to an average of 63% in the developed countries).

(b) The crude activity rate is relatively low, not reaching 30% in most Arab countries (compared to approximately 45% in developed countries). The participation rate of Arab women is between 10 and 11%.

(c) Despite the expected substantial increase in the economically active population in the Arab region during the coming decade (from approximately 39 million in 1970 to 51 million in 1980), the dependency burden will continue to rise. In many Arab countries every economically active person will have more then 3 or 4 dependents, almost half of them below the age of 15.

(d) The proportion of agricultural workers in the structure of the labour force is very high in most Arab countries (85.8% in the Sudan); and it is among these workers that exist the heaviest dependency burden, under-payment, underemployment and unemployment, and illiteracy and traditional economic skills.

(e) Despite the efforts made by some Arab countries to bring in some change in the structure of the labour force for the benefit of other sectors, the change is and will be expected to be very slight and slow.

(f) Almost all Arab countries suffer from serious manpower problems: the dominance of the 'traditional' jobs; the shortage of technical skills particularly at the higher levels; the prevalence of white collar workers; the imbalance in the distribution of jobs between production sectors and the tertiary sector of services; the undue misplacement and low level of productivity; and the gap between manpower demands and educational supply in terms of kind, quality, and quantity.

(g) The most serious defect characterizing the economically active population in most Arab countries is its unfavourable skill or educational structure. Most of the rank and file of the labour force is illiterate, whether alphabetically or functionally. The whole employment structure, in consequence, badly needs regeneration and reconstruction. This calls for a new educational policy concerning adult education.

The economic structure in the Arab region suffers from many weaknesses. A substantial traditional sector exists side by side with the modern sector with no clear-cut line of demarcation between the two. Despite the vast potential resources of the region, most Arab countries exhibit a relatively poor level of production (the total Gross Domestic Product (GDP) of the whole region was estimated at less than $25 thousand million in 1965) as well as poor living standards (except for Kuwait and Libya the average per capita income in the Arab countries was estimated at below $300, and sometimes less than $100). The share of the productive sectors in the GDP varied from 60% and over in some countries like Kuwait and Libya to 50% and below in Tunisia, Algeria, the Syrian Arab Republic, Jordan and Lebanon. In all cases the level of consumption is very high (between 83% and 90% of the gross national product), thus leaving little room for capital formation in most Arab countries. The rate of growth of Gross National Product could hardly exceeded 5% (with the exception of oil producing countries). The most important contributory factor of this situation, is the acute inadequacy of education, in terms of both quantity and quality. At the same time educational development has suffered from constraints of economic growth.

In chapter two, educational development in the region during the last decade is reviewed. In 1960 total enrolment at all levels in all Arab countries was 8,585,800; by 1967, it had risen to 13,748,200; and in 1970, it was estimated at over 15 million. With the expansion of education at all levels financial allocations (both current and capital) for education have increased substantially. Educational expenditure in 1960 was estimated at $701.8 million (i.e. 3.8% of the national income) as compared to $1,170.8 million (in current prices) in 1967; and to approximately $1500 million (approximately 5% of the national income) in 1970.

Along with the quantitative development some improvements were introduced in the character and quality of education. The most important of these improvements were: the organization of the educational systems according to the 6-3-3 pattern and the raising of technical and vocational education to the upper secondary level, the revision of curricula and the provision of more equipment and audio-visual aids, in-service training programmes for teachers, the trend toward decentralization and administrative reform, the growing awareness of the value of educational research, and the adoption of educational planning.

On the other hand the chapter points out some serious educational problems and short-commings that still exist. Among these are: substantial proportion of children of primary school age who are still out of school (approximately 50%) slight improvement of the first-time first grade enrolment ratio (less than 1 point per year) and a slow-down of the growth rate of enrolment in the first level after 1965; the high percentage of young people of secondary school age who are out of school (more than 82%); prevalence of old patterns of objectives and conditions of secondary education; maladjustment between higher education and societal needs for highly skilled manpower; inequality of educational opportunities between girls and boys and between urban and rural areas; teaching staff problems whether in preparation, recruitment or in-service training; lack of efficient administration and of adaptability of education; serious shortage of adequate school buildings and equipment; and, finally a high degree of wastage.

Chapter three tries to reflect the atmosphere of the Conference, to present some of the ideas and concepts emerging from the discussions, and to highlight the major resolutions which could serve as a blueprint for future educational reform. The headings used in the chapter are: the call for future expansion of education (at all levels); towards a strategy for quality of education; improving technical and vocational education; promoting the access of girls to secondary technical and vocational education; towards an educated nation; more adequate educational planning; educational research; education of children of Palestinian refugees; education in less developed areas of the region; brain drain; national and international co-operation for educational development in the region.

In the concluding chapter, 'Educational Perspectives in the Arab Region for the 1970s', three points arise: (a) the factors, mainly social and economic, that are expected to hamper the implementation of the Conference's resolutions and consequently the development of education during the following decade in the region (among these are the peculiar age structure of the population, the relatively high rate of population growth, the relatively small economically active population, the medium or slow growth of national product, and the very low per capita income of over half the total population); (b) the urgent need for adopting new formulae, devices and techniques in education in the region, otherwise education will not only be hampered, but also it may well share responsibility for a crisis in the region; (c) the cost and financial feasibility of expanding primary education to include all children of primary school age in the region by 1980 (which is one of the major aspirations and resolutions of the Marrakesh Conference and previous regional conferences). Under this last point is included a summary of a study prepared by Unesco for the Marrakesh Conference under the title 'Perspectives for Formal Education in the Arab States (1968/69-1980/81)'. In the study, a revised version of the Unesco Model of Educational Development, originally developed for Asian States, was used: objectives and hypotheses for educational development, based on certain Arab educational aspirations in the region were formulated, and translated into values of parameters for the model. Educational expansion at all levels was consequently projected, and the cost of the projected expansion in education was estimated. It was concluded that such an expansion could be financially feasible if the Gross National Product in the region grows at an annual rate of 6 or 7%.

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